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## LECTURES, MONOGRAPHS, AND CASES.

*Clinical Lecture on Cases of Local and General Paralysis.* Delivered at the Bellevue Hospital. By AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island College Hospital.

GENTLEMEN—My hospital service during the present session has been unusually rich in cases of paralysis. Your attention has been called to these cases, from time to time, in the wards and in the amphitheatre. Most of the cases are still under our observation. I propose to review the facts sufficiently to call your attention to the more important of the practical points involved in the clinical history of the different forms of paralysis which the cases exemplify. I shall distribute the cases into the following groups: 1st. Cases of local paralysis; 2d. Cases of general paralysis; 3d. Cases of hemiplegia; and 4th. Cases of paraplegia. In treating of these varieties of paralysis, I shall exhibit the different cases of each variety, which are now in hospital. In the present lecture I shall limit myself to the cases of local and general paralysis.

Here is a patient affected with facial paralysis. The paralysis has already existed for several weeks. The patient is tuberculous. The muscles of the left side of the face are paralyzed, and there is a purulent discharge from the left ear.

If you compare the two sides of the face, you perceive that, although there is no distortion so long as the patient does not speak or laugh, there is a manifest disparity in appearance. The expression on the two sides differs; or, rather, there is no expression on the left side. Loss of the expression, habitual to the person affected, is one of the appearances denoting facial paralysis. What is the explanation of this? It is a wonderful fact, which I doubt not has often occurred to all of you, that of all the living persons whom we see, no two have an expression of countenance so identical that we cannot readily distinguish the one from the other. This infinite diversity of expression is due, in a great measure, to differences as regards the tonic contractions of the facial muscles. Now, when the facial muscles on one side are paralyzed, the tonic contractions on that side are impaired or lost, and, hence, the abolition of the expression, so far as it is dependent on these muscles.

If I cause the patient to talk, and especially to laugh, you will see at once a remarkable distortion. I make him laugh by simply asking him if he is able to laugh on both sides of his face. The idea conveyed by such a question as this is so ludicrous, that it rarely fails to accomplish the object. You see the mouth is drawn to the right side. This is because the muscles on this side are not antagonized by the corresponding muscles on the opposite side. If you watch the eyes for a moment, you will notice that he winks only with his right eye. I ask him to close both eyes, and you observe the left eyelids remain separated, and the patient rolls the ball upward. He is unable to close the left eye. I wish to call your attention particularly to this fact. The case is one of local paralysis; the patient has lost the control of those muscles only to which the facial nerve is distributed. In these cases, the orbicular muscle of the eye, on the affected side, generally participates in the paralysis. We shall see it is otherwise when facial paralysis occurs in cases of hemiplegia. If you notice the *ala nasi* when I cause the patient to breathe in a forcible manner, you will see that the nostril dilates on the healthy side only.

The paralysis, as I have said, is limited to the facial muscles. The extremities on either side are not affected, and the tongue is protruded in a right line. Now, the obstruction to the transmission of volition to the paralyzed muscles, in such cases of local paralysis, may be seated somewhere in the tract of the facial nerve, or it may be seated in the cerebral centre, at the point of the origin of this nerve. It is desirable, in individual cases, to determine whether the affection

be limited to the nerve, or whether it be symptomatic of cerebral disease.

Facial paralysis sometimes precedes the manifestations of a grave disease of brain. Let me cite a case illustrative of this statement.

About a year ago I was consulted in the case of a young woman recently married, and three months advanced in pregnancy. On getting up in the morning, the face was found to be paralyzed on one side. She had considered herself perfectly well, and had been at the opera the previous evening. I saw the patient in consultation three days after this occurrence. The facial paralysis continued, and the tongue was deflected to the paralyzed side. No other muscles were affected. She was disposed to somnolency, but declared that she was scarcely ill, complaining only of slight pain in the temple opposite to the side of the paralysis. Suddenly, the next morning after my visit, while getting out of bed, she fell to the floor; convulsions and coma ensued, which continued until her death, on the following day.

In this case the facial paralysis was an event of importance, as heralding the development of a fatal cerebral disease; but, in the majority of cases, it has no such significance, and the only question is, whether it will be transient or permanent. It is obviously a matter of no little moment to decide whether the paralysis constitute the affection, or whether it be symptomatic of centric trouble of some kind. How is this point to be settled? The following points are to be attended to in endeavoring to form an opinion: Is there an appreciable tumor or swelling of any kind in the tract of the nerve, after its emergence from the stylo-mastoid foramen? If so, the paralysis is probably due to pressure on the nerve. If the paralysis be preceded by otorrhœa, as in the case before us, we may strongly suspect an affection of the nerve after it enters the internal auditory meatus. On the other hand, if there be nothing apparent to the touch or eye showing the nerve to be affected, it is to be observed whether the paralysis be confined exclusively to the muscles to which this nerve is distributed. If the tongue be distinctly deflected towards the paralyzed side, a centric affection is probable; so, if the articulation be impaired, the deflection of the uvula does not possess much value, as this is so often the case, irrespective of paralysis. Attention is also to be directed to the muscles of the upper and lower extremities on the paralyzed side. There may be distinct, although slight, impairment of control or power over these muscles, which, without close observation, escapes detection. I have known instances in which slight hemiplegia existed without being obvious, and without the

knowledge of the patient. To settle this point, cause the patient to perform diverse movements alternately of the opposite extremities, and measure the power of grasping with the two hands. Coexisting cerebral symptoms, such as pains and vertigo, are of considerable importance, as pointing to a centric affection; yet it is to be borne in mind that these symptoms may be coincident with paralysis, dependent wholly on an affection of the nerve. We shall presently see, in another case, that the coexistence of paralysis of the sixth pair of nerves with facial paralysis, denotes a centric lesion of some kind. Claude Bernard has suggested an interesting point bearing on the question under consideration. In several cases of facial paralysis, he found that the nerve of taste on the half of the tongue corresponding to the affected side was notably impaired. Sapid substances, such as quinia and citric acid, were with difficulty distinguished when applied to one-half of the tongue. He attributes this result to the communication between the facial and gustatory nerves, by means of the *chorda tympani*. In experiments on inferior animals, he has found that division of the latter nerve is followed by a similar result. In cases, therefore, in which the taste is affected, it may be presumed that the affection is either centric, or situated between the origin of the *portio dura* and the point at which the *chorda tympani* is given off.

Assuming that facial paralysis be not attended by circumstances denoting a cerebral affection, and that there are no circumstances showing pressure upon, or lesion of, the nerve, such as enlargement of the parotid gland, a tumor of any kind, disease of the ear or temporal bone, it is to be regarded as functional, and a favorable prognosis may be entertained. I have known it to occur in two instances in connection with anæmia; in one case shortly before, and in the other shortly after, pregnancy. In both cases there was complete recovery. I have known it to follow prolonged exposure of the face to the cold air, and recovery has always taken place. In the patient before you, there is probably disease of the ear involving the nerve, and the prognosis is not favorable.\*

I now present, gentlemen, another patient with facial paralysis. The same diagnostic appearances are presented in this as in the other patient, viz.: the loss of expression on the affected side, the distortion when he speaks or laughs, the very slight movement in winking, and inability to close the eye. In this case, the paralysis has existed

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\* Some weeks afterwards the patient died from tuberculosis, the paralysis continuing until his death.



for thirteen years. He did not enter the hospital to be treated for this affection, but for disorder of the bowels. There is no probability of recovery from the paralysis; it will doubtless continue as long as he lives.

The paralysis in this case followed a fall upon the head. He does not suffer from any symptoms denoting cerebral disease at the present time, irrespective of the paralysis. We may, however, conclude that the paralysis depends not on an affection of the nerve, but on a centric lesion of some kind. What is the evidence of this? You see the eye on the affected side is affected with strabismus. The cornea is directed inwardly, and the ball is fixed in that position; he cannot roll it in an outward direction. This shows that the paralysis involves the sixth of the cranial nerves. The external rectus muscle is animated by this nerve, and it no longer antagonizes the internal rectus; hence the eye is turned inward by the latter muscle, and fixed in that position. Now the sixth nerve has its origin at a point close to the origin of the facial nerve, and, therefore, as it is reasonable to conclude, there exists a centric lesion, involving both nerves.

I wish to call your attention in this case to the appearance of the tongue when protruded. It appears to be deflected towards the paralyzed side, does it not? Is there any one here who doubts that it is so deflected? As there is no response, I assume there is but one opinion on this point. Let me show that you are all mistaken. The face in this case is habitually drawn a little to the sound side. I now, with my hand, draw backward the cheek on the paralyzed side, so that the angles of the mouth are equidistant from the median line. I ask him to protrude the tongue, and you see it is in a direct line. The appearances before were illusory. The half of the lip on the paralyzed side covering a portion of the tongue, it appeared to be deflected, when it was not in the least. This is a source of error which I do not recollect ever to have seen pointed out, and it is desirable to keep it in mind.

In conjunction with the case just presented, the case which I now present possesses interest. This patient has paralysis affecting the third cranial nerve on one side. This nerve is distributed to all the straight muscles of the eyeball except the external or abductor muscle, to the levator muscle of the upper eyelid, and to the iris, when affected with paralysis; therefore, the eye is turned outward by the abductor muscle, in consequence of the want of antagonism of the abductor muscle; the upper lid drops, closing the eye more or less, constituting ptosis, and the pupil is dilated and motionless. These re-

sults are manifested in this case. You see the eye is closed, and the patient is unable to raise the upper lid. When I raise it with my finger you see the eyeball turns outward, and the patient is unable to move it inwardly and look towards the nose. The pupil, too, as you see, is twice as large as in the other eye. When the lid is raised, however, the patient sees without difficulty.

Here, then, is a local paralysis; none other of the cranial nerves are involved. The patient has no symptoms denoting a cerebral affection aside from this paralysis. It has not been of long duration. It is probably a functional affection, and I venture to predict that it will not be permanent.\*

But there is another form of local paralysis associated in this case. The patient has nearly lost the power of flexing the fingers of both hands. He is unable to grasp anything; he can flex the forearm on the arm, and carry both hands to his head. The hands do not drop as in lead-paralysis. The power over the extensor muscles is impaired, but the loss of power is especially in the flexor muscles of the fingers. Both hands are equally affected. This loss of power was preceded by pains, which were considered as rheumatic, in the upper extremities; aside from these ailments, there appears to be nothing at fault. His appetite and digestion are good. The thoracic organs are sound. He is forty-six years of age, but he looks much older than this. The hair and beard are white, and the complexion is pallid.

Now, how is this loss of power over the flexor muscles to be explained? We should at once suspect the muscular atrophy, which has of late years been studied by Cruveilhier, Aran, and others; but the upper extremities are not wasted. The muscles, however, feel remarkably soft and flabby, and I think it can hardly be doubted that they have undergone some change; in other words, the muscles themselves are affected, and the loss of power is dependent on this change, not on an obstacle to the transmission of volition through the nerves to the muscles. The fact that both extremities are alike affected goes to sustain this conclusion. Under this view, all that we can do is to endeavor to invigorate the body generally; to excite the circulation and nutrition in the affected muscles, by stimulating liniments, with friction, and to urge the patient to exercise the muscles as much as possible. It will be advisable to make trial of the electro-magnetic currents in this case.

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\* The patient recovered from the ptosis after the lapse of several weeks, but not from the affection of the muscles of the forearm, subsequently described.

In contrast with the case just presented, here are two patients affected with the form of local paralysis peculiar to lead-poisoning, viz., the "wrist drop." On raising the forearm of each extremity at right angles with the arm, the dorsal aspect upward, you see the hands drop. The patients are unable to raise the hand of either extremity to a level with the forearm. They can move the forearm freely, and the arm. The paralysis is limited to the extensor muscles of the forearm. If I place my hand in their palms, so that they can grip it with their fingers, I find they are able to squeeze with considerable force. The strength in all the muscles of the upper extremities except the extensors of the hands was illustrated the other day, by the fact that one of these patients carried on his back from a ward on the first floor up to this amphitheatre, at the top of the building, another patient who was affected with paraplegia! There are few of those present who would be able to perform such a feat of muscular strength.

As I have already, in connection with these cases, in a previous lecture, considered fully lead-paralysis, I will not enlarge on the subject now. I will simply remark, that the paralysis here is due to an affection of the muscles themselves. Probably the paralysis involves the presence of lead in the affected muscles. That it does not proceed from an affection of a nervous centre, is shown by the limited number of muscles affected, and the fact that the same muscles on the two sides are affected. To suppose that there exists an affection of either the brain or spinal cord so limited as to involve only the nervous fibres distributed to the extensor muscles of the forearm, and that an affection so limited exists either in both hemispheres or lateral divisions of the cord, is to suppose coincidences which might possibly occur in a single case, but that they occur in a series of cases, is inconceivable. We must, therefore, logically refer the rest of the affection to the muscles. This form of lead-paralysis is embraced in the category of symmetrical diseases, and the law of parallelism is considered as involving the pre-existence of a blood-change. We may, therefore, infer that the morbid material, the lead, is brought to the affected muscles in the blood.

I have still another case of local paralysis. Here is a man whose left hand is incompletely paralyzed; the affection has existed for two weeks. The movements of the hand and fingers are much enfeebled and the sensibility is also impaired. In other respects he is well. It is obvious that the loss of muscular power and sensibility in this case has proceeded from some cause acting on the part; and on closely questioning the patient, I find that he dates the occurrence of the

affection from a fit of intoxication. When he recovered his consciousness, he found the affected hand paralyzed. The explanation is this: While in a state of drunkenness he lay with this hand doubled under the body, and the paralysis is due to the long-continued pressure. He has had a sense of numbness in the hand, but no pain. He has been in the hospital a week, and the improvement already is considerable. The only treatment has been friction with a stimulating liniment, and use. The recovery will, in a short time, be complete.\*

We meet occasionally with cases of paralysis produced in a similar way. I have known an instance in which temporary paralysis of the arm was produced by sleeping with the arm hanging over the back of a chair.

The two patients, gentlemen, remaining in the amphitheatre exemplify general paralysis. By the term general paralysis you are not, of course, to infer that all the muscles of the body are affected, since such a condition would be incompatible with the continuance of life. You are not to infer that even all the voluntary muscles are paralyzed. Such a condition, however, might exist, and life continue. Any of you who have read the novel by Dumas called *Monte Christo*, will probably recollect that one of the *dramatis personæ* is represented as affected with paralysis extending over all the voluntary muscles except the orbicular muscles of the eyes; the faculties of the mind remaining intact. Such a case was not a creation of the author's imagination. A distinguished friend and colleague of mine once related to me precisely such a case which came under his observation, and the patient recovered. But the term general paralysis is not restricted to cases of this description; it is applied to cases in which both the upper and lower extremities are paralyzed, with or without an affection of the cranial nerves.

The patient whom I shall first present is affected with general paralysis, following an injury to the upper part of the spinal cord. As the history is brief, I will read it from my Book of Records.

"James Tully, age 42, Irishman, driver of coal-cart; admitted Sept. 18, 1861.

"On the 8th of March last he fell from his coal-cart, striking on the top of the head, and the wheel of the cart passed over his neck. He got up instantly, but suffered great pain in the neck, shoulders, and chest. He states that he was obliged to sit up constantly for three

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\* The patient shortly afterwards was discharged, quite well.

weeks on account of the aggravation of the pain on lying down. He was also obliged to incline his head to the right side. There was no paralysis for four months. In about five weeks after the accident he was able to return to work. He was not, however, entirely free from soreness in the neck, and he found that he could not throw coals into his cart, on account of this soreness. He then took to peddling coals in a basket.

"Four months after the accident he began to lose power over the upper and lower extremities. The paralysis progressively increased, and he was obliged to quit work two weeks before his admission. The loss of power is greater on the right side. He has remained in about a stationary condition since he has been in hospital."

He is able to walk, as you see, but with difficulty. You perceive the movements of the right limb are more difficult than those of the left. The paralysis of the upper and lower limbs appears to be about equal. With the right hand he grasps feebly, but with the left he exerts considerable force. The sensibility is everywhere intact. He has had some difficulty in urination, but there is none at present. There is no paralysis of the tongue or face. There is no soreness or pressure on the neck, and no displacement of the vertebræ.

He suffers much in the night-time from cramps in the legs and arms, and from pain in the neck and shoulders. He states, also, that he is subject to muscular tremor in the night-time, like a person with ague. His appetite and digestion are good, and his general aspect is healthful.

Since his admission he has been blistered repeatedly on the nucha, and dry cups have been several times applied. Cathartics have been given to relieve constipation. Electricity has been employed, and he has taken ergot. His condition, as already remarked, is about the same as on his admission.

Now what is the pathological condition giving rise to the paralysis in this case? That the paralysis is not due to an injury of the spinal cord received at the time of the accident, is shown by the non-occurrence of the paralysis for four months. The great pain which occurred soon after the accident, and continued for several weeks, increased by the recumbent posture, probably proceeded from meningeal inflammation; and the paralysis, subsequently developed, is to be considered as a result either of pressure by an inflammatory product of some kind on the cervical portion of the cord, or of an extension of the inflammation, with softening, to the cord, (myelitis.) The occurrence of cramps in the limbs, the muscular tremor and the continued pain, are to be

regarded as evidence of inflammatory action in the meninges of the cord.

It is not easy to form a positive opinion as regards the prognosis in this case. The fact that the paralysis has now existed for several weeks without any increase is a favorable point. If, however, it continues several months longer and no improvement takes place, the prospect will be far less favorable.

I do not conceive that, in this case, any advantage is to be derived from continued counter-irritation, or, indeed, any active medication. I cannot see any grounds for giving strychnine or employing electricity to excite the affected muscles. He is able to excite them by means of volition. He should be encouraged to do this,—to exercise the muscles as much as possible, without inducing pain, fatigue, or exhaustion. Upon this, with time, as it appears to me, our hopes of improvement or recovery are to rest.

In connection with this case I may mention that I have met with several cases of paralysis of the upper and lower extremities, more or less complete, occurring spontaneously, or, speaking more correctly, not traumatic, in which recovery has taken place. I have reported two cases observed in the New Orleans Charity Hospital; in both the patients having been for a considerable period confined to the bed; the improvement being progressive and rapid after they were taken out of bed, made to sit up, and encouraged to persevere in voluntary efforts to exercise the affected muscles. On systematic, persisting exertions of volition on the part of the patient, conjoined with friction, must be the chief dependence for restoration in most cases of paralysis, as we shall see when we come to consider cases of hemiplegia and paraplegia.

The last of the cases which I shall present to-day exemplifies a rare and interesting variety of general paralysis. It is now generally known by the name given to it by Prof. Reguin, of Paris, viz.: general progressive paralysis, (*paralysie générale progressive*.) It has also been called the paralysis of the insane.

Let me first call your attention to the characteristic appearances which the case presents. I shall ask the patient several questions, and I wish you to notice his articulation in replying to them. You see he speaks with hesitancy and difficulty. The impediment is unlike that in stammerers. He does not stammer, but he mumbles his words somewhat like a person half asleep. The embarrassment proceeds from an incomplete paralysis of the muscles employed in speech. He is much inclined to talk, especially about himself, and, from our con-

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version, it must be obvious to you that the mental faculties are weakened. They are not congenitally so, for this person was once evidently an active, intelligent man.

I will now ask him to walk two or three times across the area. You see he walks with an uncertain and unsteady gait, like a person slightly intoxicated. I saw this patient before his admission. A member of your class found him outside the hospital gate endeavoring to inquire the way to the entrance, and he brought him to me at the college. I thought at first he was intoxicated, but, finding no odor of spirit in his breath, I gave him a note to the warden, and he was admitted into one of my wards.

In order to show you how he moves the fingers, I will ask him to unbutton his vest and suspenders. You see how difficult it is for him to do this; his hands tremble, although they are not tremulous when at rest, and he fumbles for a long time before he proceeds. His movements are like those of a person whose hands are greatly benumbed with cold.

The muscles of speech and of the extremities are affected with paralysis of a peculiar kind. There is not much positive loss of voluntary power. When he grasps my hand and presses it, he exerts a degree of force which is somewhat painful. The peculiarity consists in this: he finds it difficult to combine the movements of the muscles for particular ends; in other words, to make the muscles co-operate for the performance of definite objects of volition.

This variety of paralysis is very rarely seen except among the insane. Some have contended that it never occurs except in connection with insanity. This case, as you will perceive, does not go to disprove the correctness of the latter statement. I will now read the history of the case as I have noted it in my Hospital Records:

"Harmon Sanderson, aged 46, engineer, admitted Nov. 20, 1861.

"He states that he has always been a temperate man; that he had gonorrhœa twenty years ago, and that he has never had syphilis.

"He dates his illness from Sept., 1860. He was then much exposed to cold, working with his feet constantly wet for several successive days. The first difficulty was diminished power of controlling the motions of his fingers. He found he could not readily button and unbutton his clothes. He is not aware that, at first, there was any difficulty in speech or in walking. The difficulty of controlling the motions of the fingers gradually increased, and it was not until

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six months had elapsed that he noticed any difficulty in speech. Still later, he first noticed difficulty in walking.

"He says, in answer to an inquiry, that he has been deranged, and was in the Retreat at Hartford for six months. This, he says, was prior to his present malady. His memory is so imperfect, that his statements with regard to dates are, probably, not very reliable, but he is certain that the mental derangement preceded the paralysis.

"He says that his urine sometimes escapes involuntarily. When he desires to urinate, he cannot always refrain until he succeeds in unbuttoning his clothes. His urine is acid, and not albuminous.

"His appetite is good. There is no evidence of disordered digestion. The bowels are habitually constipated. With regard to the sexual function, he thinks he is not impotent. The mental powers are feeble. He recalls events slowly, and I presume their accuracy is questionable. The orderly says he manifests delirium by getting up at night and walking about the ward, and by incongruous conversation. His hearing is good, but his vision is sometimes blurred.

"Examination of chest yields negative results as regards disease of lungs and heart."

What is the pathology of this form of paralysis? It depends, undoubtedly, on some affection of the nervous system, but its connection with any uniform, definite lesions has not been established. It is a form of paralysis which offers very little encouragement of improvement. All clinical observers agree in regarding recovery as hopeless. It progresses, as the name implies, and all that is to be hoped for is a slow advancement. As it progresses, locomotion and speech become more and more impaired, and, at length, the power of combining voluntary movements is lost. The urine and feces are evacuated involuntarily. The mind sinks into a state of imbecility. Sometimes epileptic paroxysms and fits of active delirium occur. Death takes place by slow asthénia, which may be hastened by diarrhœa, erysipelas, or gangrene of the nates. Life is sometimes destroyed by a low grade of pneumonia. The duration is found to vary greatly in different cases. It is essentially a chronic affection, but it may end fatally in a few months, or be protracted for several years.

Progressive general paralysis is not to be confounded with another affection to which it bears some similitude, viz., *progressive muscular atrophy*. The latter is an affection seated in the muscles themselves. The muscles undergo structural degeneration, and gradually waste. The affection seizes upon a few muscles in some part of the body, and is apt to extend to other muscles, until, at length, the whole volun-

tary muscular system may be invaded. I have quite recently seen a case with my esteemed colleague, Prof. Taylor, in which the muscles of the left upper extremity have become affected with atrophy. The muscles of the scapula are so much attenuated, that this bone is, as it were, displayed, while it is concealed by an abundance of muscular covering on the opposite side. The arm and forearm are much diminished in size, and the muscular power correspondingly impaired. This has taken place in the course of a few weeks, having been preceded, as well as accompanied, by pretty severe pain in the affected muscles.

Progressive muscular atrophy, as well as progressive general paralysis, is a hopeless affection, as regards recovery. If it invade successively the different parts of the muscular system, it proves fatal, in like manner, by slow asthenia; or, if the respiratory muscles become affected, life may be cut short by apnoea.

In the way of treatment, in our case of progressive general paralysis, the indications are, in general terms, to maintain the functions, to endeavor to strengthen the body by tonic remedies, together with an invigorating regimen, and to encourage the use of the voluntary muscles. Under a theoretical idea of the applicability of phosphorus to the treatment of certain affections of the nervous system, I have prescribed the dilute phosphoric acid, but I have no practical knowledge of its utility in this affection.\*

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*On Cainca.* By Dr. JOHN C. PETERS.

AUTHORITIES: *Frank's Magazine*; *Trousseau and Pidoux's Materia Medica*; *Vogt's Materia Medica*; *Dierbach's Materia Medica*; *Sobornheim's Materia Medica*.

SYNONYMS: *Cachinca*; *Kahinca*; *Cainana*.

*Botany.*—Cainca is the root of the *Chiococca angifuga* of Martius; of the *Chiococca* or *Cainca racemosa* of Linnæus; or of the *C. Scandens* of Riedel. It is indigenous to Brazil and the Antilles. It belongs to the Pentandria monogynia of Linnæus; to the group of the *Coffeaceæ* of Decandolle, a subdivision of the *Rubiaceæ* of Jussieu.

*Physical Properties.*—The smell of the fresh root is somewhat re-

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\* This patient remained in Bellevue Hospital for some time without any improvement, and was transferred to the Blackwell's Island Hospital, where he still remains, without improvement.

pulsive and acrid; at first, resembling in a measure that of coffee, but subsequently pungent. The taste is disagreeable and acrid, and apt to excite salivation and nausea.

*Chemical Composition.*—Caincanium, or Acidum caincicum, is the active principle of the root; it crystallizes in white, shining, silk-like needles; has no smell, and at first seems insipid, but gradually develops an unpleasant, bitter, and acrid taste. Sobernheim says it is readily soluble in hot alcohol and acetic acid; but is dissolved with great difficulty in water and ether. Dierbach says it dissolves in six hundred parts of water, and in about as much ether. With alkaline and earthy bases, it forms salts readily soluble in water. François says it acts as a powerful *diuretic* in doses of five to fifteen grains. The other components are of no particular importance, except an oily-green substance, which is soluble in ether, and upon which depends the odor of the root. Other chemists have supposed that they have discovered a peculiar cainca emetin, or chiococcin, in the root.

*Remarks.*—In the last number (Jan., 1862,) of this journal, page 49, we read:

"Of all remedies applicable in dropsy, Dr. Genoves y Tio awards the first rank to the cainca-root, as being powerfully diuretic, slightly purgative, and *always tonic*. The powdered root may be given daily in the dose of a drachm or more; the wine of the root has also tonic, but no diuretic or cathartic properties." These simple words sufficed to renew an interest which I had taken in the study of the effects of cainca several years ago, and which led me to procure and prepare the remedy, although I had no occasion to use it, as the cases of dropsy in which I thought of applying it all recovered under the influence of other remedies better known in this country; such as iodide of potash, benzoate of ammonia, apocynum cannabinum, digitalis, squills, &c. But there is a great deal of testimony in favor of the use of cainca in dropsy; Frank details at least forty cases in his *Magazine*, and the principal French and German writers on the materia medica recommend it. It may be allowable here to state that *Frank's Magazine* consists of four volumes, of upward or over one thousand pages each, and is a perfect storehouse of the most valuable and reliable facts in materia medica and therapeutics. It is devoted exclusively to the preservation, in a convenient form, of the records of the undoubted effects of medicines on the healthy, and the detail of cases of disease cured with one remedy only. All cases in which more than one medicine was used in effecting a cure are rigidly excluded.

To return to cainca: Dierbach says it resembles coffee and ipecac

in its action; Langsdorf and Martius compare its effects with those of *Helleborus niger*; while Loewenstein supposes that *gratiola* is more nearly like it.

*Effects on the Healthy.*—Wolff, Physician to the Berlin Charity Hospital, gave  $\frac{1}{2}$  drachm of the powdered root in  $\frac{1}{2}$  ounce of simple syrup to a healthy man, night and morning; it caused nausea, without vomiting, followed by four copious stools, while the quantity and quality of the urine remained unchanged. A robust, convalescent patient received by mistake 30 grains of pulv. rad. caincæ; he simply had two diarrhœic stools, without colic. A delicate man took 30 grains, and had three alvine passages, without colic. A robust woman took 1 drachm in the morning as a purgative, but as it had not a speedy effect, she received 30 grains more in the afternoon, and then had three copious stools, with frequent but fruitless endeavors to urinate; during the following night she had great urging to pass water, and diarrhœa, without colic. A man aged 50 took 40 grains without any perceptible effect. A girl aged 18 took 12 grains of the extract as a laxative, and had six stools without pain or colic, although almost all other purgatives, even the mildest, always produced unpleasant effects; the urine was not increased at this time, but several weeks subsequently she took another dose of 12 grains, without any effect upon the bowels, while very copious discharges of urine were induced.

Frank says it possesses undoubted purgative and diuretic tendencies; sometimes one effect is more prominent than the other, and sometimes they occur in alternation in the same subject; when both effects are produced, the diuresis generally sets in several hours after the diarrhœa has ceased. In a few very sensitive persons, discomfort, nausea, and even colic may be excited by quite small doses, while the majority experience but little annoyance from rather large quantities. After using cainca for some time, the tongue is apt to become uniformly clean and red, without losing anything in its breadth or moisture; the inner side of the cheek takes on the same dark-red appearance; if the remedy be not intermitted soon after this occurs, fever, with more or less thirst, is apt to set in. François says it is more likely to act as a diuretic when the urine is scanty, acrid, and dark in color; after the first few doses the water is apt to become lighter in color, more abundant, and the discharge no longer painful. Profuse salivation has been noticed as one of its effects. Some have thought that the pulse occasionally becomes slower while it is used. Langsdorf says it sometimes acts as an emmenagogue. Vogt thinks it possesses pretty decided purgative powers, and compares it to jalap; if given in proper

quantities, it will cause several thin, watery stools, with more or less, or little or no griping, so that it is not nearly so disagreeable in its effects as the ordinary acrid, drastic cathartics are. The purgative operation may set in in the course of three or four hours, or not occur till the end of several days, and then is generally followed by decided diuresis, by which at first dark and saturated urine is voided, and then lighter-colored water follows in abundance. If the stomach be previously irritable, vomiting, colic, distention of the abdomen, fever, and profuse watery diarrhoea, may present themselves, without being followed by diuresis or absorption of dropsical effusions. Caventon and François have noticed *tonic* properties in addition to a very decided diuretic tendency.

*Formulae and Doses.*—Trousseau and Pidoux recommend the *decoction of cainca*, made with 8 grammes of the bark of the root of cainca macerated for 48 hours in 250 grammes of cold water; then boiled for 10 minutes and strained. This quantity to be taken in 2 doses: This is François' favorite preparation. The *wine* of cainca is made with 1 part of the medicine to 16 parts of Malaga wine, allowed to macerate for eight days, and then filtered. *Syrup* of cainca is made with 500 grammes of simple syrup to 3 grammes and 50 centigrammes of the alcoholic extract of cainca; the extract is dissolved in a little water and filtered, then added to the hot or boiling syrup, and allowed to cool; this syrup contains 4 grains of cainca to every ounce of syrup. Beral has prepared a vinous syrup and a *saccharolé de cainca*; the latter containing 24 grains of the extract to an ounce of sugar, being the equivalent of 2 ounces of the root. The *extract* of cainca is obtained from 1 part of the medicine to a sufficient quantity of alcohol to produce one-sixth part in weight of the extract from the root. Vogt says the *bark* of the root is the only active part, and may be given powdered, in doses of from 20 to 30 grains per day, gradually increased until catharsis or diuresis is induced; he adds, that as the powder of the bark is most apt to disagree, an infusion of it, so that from 1 to 3 drachms of the active principle may be given per day, is generally preferred; or the alcoholic extract, 20 to 30 grains in every 24 hours, may be substituted. Professor Fouquier used the following formula with success in several cases of dropsy: Powder of cainca 1 drachm, powdered gum-arabic 30 grains, and honey sufficient to make an electuary; the patient took once or twice this quantity of electuary every day; the dropsies diminished, and a cure followed. Trousseau and Pidoux refer to the use of the *decoction* in the proportion of 1 to 2 drachms of the root to a pint of water; or the powder in quantities of

40 to 50 grains to 2 drachms of sugar; or 12 to 24 grains of the aqueous extract. Dierbach recommends table-spoonful doses four times a day of the *vinum radicis caincæ* of *Beral*. Sobernheim recommends the spirituous extract of the root, made with 12 ounces of cainca to 6 pounds of alcohol, reduced to 2 ounces of the extract, of which 12 grains represent 1 ounce of the root in strength. Also an infusion of 1 or 2 drachms of the root in 8 to 12 ounces of water, of which a table-spoonful is to be given from two to four times a day. The powder of the root, Sobernheim and Loewenstein say, acts so powerfully that it should only be given in doses of 5 to 10 grains three times a day. The extract, they assume, may be used in doses of 2 grains three times a day, gradually increased to 20 or 40 grains. Cinnamon will correct the unpleasant taste of the drug. Spirits of nitric ether will remove the nausea and vomiting sometimes caused by it. Sobernheim also recommends an electuary made with one drachm of *Rad. cainca pulv.* to one scruple of gum-arabic and a sufficient quantity of honey; to be given in tea-spoonful doses. The Hamburg infusion is made with from 2 to 6 drachms of cainca boiled in 20 ounces of water down to 8 ounces, then strained, and given in table-spoonful doses every two or three hours. A compound infusion has been made with 1 drachm of the root to 6 ounces of hot water, cooled and strained, to which is added tinct. scill. Ralin. 1 drachm, spirits nitric ether 2 drachms, inspissated juice of juniper  $\frac{1}{2}$  ounce, syrup spinæ cervinæ (*Rhamnus catharticus*) 1 ounce; 1 table-spoonful to be given every two hours. A *tinctura caincæ ammoniata* has also been used.

*General Experience in Dropsy.*—According to Trousseau and Pidoux, it is in the so-called *essential* or idiopathic dropsies, or those not caused and maintained by a local organic affection, that this bark has effected the most decided beneficial results. But in symptomatic dropsies its exhibition is not useless, for it almost always removes the serous effusions; and although these accumulations of fluid are reproduced sooner or later, because the medicine cannot cure the organic diseases which maintain and excite them, still its use is not less serviceable against the often dangerous and always distressing consequences of the mechanical pressure, and the distention of the tissues, occasioned by these abnormal effusions. It is supposed to be contra-indicated in the *acute dropsies* which often promptly follow the appearance of some eruptive fevers, especially scarlet fever; as also, when there is pre-existing inflammation of the stomach and bowels. In such cases, the cainca should be preceded by diluents and antiphlogistic remedies. Vogt says it is most useful in ascites and simple

anasarca; but adds, that if Langsdorf's supposition is correct, that it possesses resolvent and emmenagogue properties, it may prove reliable in dropsies *ab obstructione viscerum et a menstribus suppressis*. Sobernheim says it has been used from time immemorial in Brazil, as a diuretic and laxative or cathartic remedy. It was first introduced into Europe by Baron Von Eschwege, while Von Langsdorf was mainly instrumental in familiarizing German physicians with its curative powers; subsequently, François, Loewenstein, Spitta, Beral, and Fouquier employed it successfully against obstinate, torpid, chronic dropsies and œdematous swellings. Wolff, of the Berlin Charity Hospital, was inclined to believe that it was only useful in slight cases, and when the strength of the patient was not reduced, as he succeeded in producing a marked diuretic action in five cases only out of nineteen, followed by removal of dropsical swellings of the lower extremities; while in twelve other cases it produced such profuse diarrhœa that its exhibition had to be withheld; but this only proves that his doses were too large. It is well to add here, that Langsdorf and Martius thought that the cathartic powers of cainca were far superior to, and greater than, its diuretic tendencies. Sobernheim infers that it is also useful in torpid menostasias, infarctions of the abdominal organs, swellings and enlargements of the liver and spleen, against chronic ulcers of the feet and legs, and obstinate skin eruptions, in all of which affections Loewenstein found it equal in curative powers to gratiola.

*Special Experience in Dropsy.* CASE 1.—A previously healthy, but rather thin widow, aged 40, was suddenly attacked with rheumatic fever and pains in the loins and limbs, against which the usual emetic, cathartic, and diaphoretic treatment proved unavailing, and in the course of a few weeks a serious state of things ensued. First the lower extremities, then the abdomen, and finally the whole body commenced to swell, and a general anasarca took place; the legs were so enlarged that almost all power of motion was lost, and the abdomen was so filled with fluid that she could only breathe with difficulty in an upright position. Juniper, squills, gamboge, and numerous other remedies had been given without benefit; when, finally, cainca was thought of; 2 drachms were boiled down in 1½ lb. of water, to 9 ounces, and of this one table-spoonful was given at first, three times a day; then two spoonfuls twice a day; and finally, four times in twenty-four hours; it acted first upon the bowels; causing from four to six, and finally ten to fifteen watery stools a day, followed by some diminution of the dropsy; it produced no effect upon the skin, and did not cause either nausea or vomiting. After the patient



had taken seven or eight portions of the medicine, a very sudden and copious secretion of turbid urine took place, with constant urging to micturate; the swelling abated rapidly, the respiration became easier, the abdomen grew soft and lax, and the legs thin, so that at the end of eight weeks almost all signs of dropsy had disappeared, although the patient remained very weak. Sixteen nine-ounce portions of the medicine were taken in all; she remained well for several years afterwards.

CASE 2.—A robust man, aged 45, was seized with rheumatic pains, especially in the lower extremities, followed by œdema of the feet, which quickly increased to a dropsical swelling of the whole body, attended with excessive distention of the abdomen and scrotum, extreme difficulty of breathing, constipation, thirst, and general fever. Blood-letting and antiphlogistic remedies were used, without benefit; calomel was given to the point of salivation, and a host of diuretic, cathartic, and diaphoretic remedies were used without benefit. Finally, 2 drachms of cainca, infused in 9 ounces of boiling water, were given, in table-spoonful doses, every two or three hours; there was no perceptible effect for five or six days, when profuse diarrhœa and increased secretion of urine sat in, followed by a diminution in size of the abdomen, scrotum, and legs. After an intermission of the medicine for several days, in consequence of the severity of the diarrhœa, the cainca was again given in table-spoonful doses, four times a day, and persisted in for four weeks; the diarrhœa and diuresis continued, and the dropsical swelling diminished in proportion, until the patient was quite well at the end of two months.

CASE 3.—A previously healthy and robust young woman, aged 22, took a severe cold, followed by suppression of the menses and considerable œdema of the legs and thighs; at the end of three months, after a variety of treatment, she was received into the Berlin Charity Hospital, with excessive swelling of the legs, great distention of the abdomen, with well-marked fluctuation, scanty urine, obstinate constipation, dryness of the skin, slowness of pulse, and absence of fever. Two drachms of rad. caincæ were boiled in 18 ounces of water, down to 9 ounces, and one table-spoonful given every two hours. In a few days profuse diuresis and diarrhœa sat in, followed by a perfect recovery in four weeks, during the whole of which time the medicine was taken with few or no intermissions.

The above cases were reported by Dr. Loewenstein, in 1829.

CASE 4.—A dropsical and hysterical woman was treated with cainca in the above-described manner, and recovered perfectly not

only from her dropsy, but from her nervousness and hysteria. It acted principally as a diuretic.

CASE 5.—A consumptive and dropsical lad, to whom the same doses of *cainca* were given, passed as much as ten Berlin quarts of urine per day, and recovered temporarily from the dropsy, but it returned again at the end of a few months, and he finally died of phthisis.

CASE 6.—A poor widow woman, reduced by poverty and exertion, gradually became dropsical, until her legs were so swelled that she could not leave her room; one drachm dose of powdered *cainca* was given, and acted as a powerful diuretic, producing a copious discharge of clear urine, followed by recovery from the dropsy; it did not act upon the bowels. Some time afterwards she came under observation again, with an attack of paralysis, but there had been no return of the dropsy.

CASE 7.—A man, aged 59, who lived in a damp, small dwelling, into which sunlight scarcely ever seemed to penetrate, had suffered for some time with chronic catarrh and dropsy of the legs, which finally confined him to his bed and chair; he was constipated; his urine scanty, but otherwise apparently natural. A sixteen-grain dose of ext. *caincæ* was given, followed in two days by twenty-four grains more, without perceptible effect; on the fifth and seventh days thirty grains were given in two doses, and on the ninth day twenty-four grains at once. On the fifth day profuse diuresis occurred, followed by progressive improvement; the medicine acted on the bowels once daily. On the tenth day two drachms of pulv. rad. *caincæ* were given, followed by rumbling in, but no movement of, the bowels; increased urination, and perceptible diminution of the dropsy of the legs. Then sixteen ounces of vin. *caincæ* were given in the course of four days; the bowels were moved daily; the urine was dark, but copious, and at the end of sixteen days no remains of the dropsy were visible, except some swelling of the feet; the patient was soon able to go up and down the stairs of a six-story house. On the twenty-second day thirty grains of the extract were given, without perceptible effect; but the cure was completed by forty grains more of the extract, given in divided doses. The remedy never produced the slightest irritation of the digestive organs.\*

CASE 8.—A woman, aged 49, was received in the Hôtel Dieu with dropsy, following fever and ague; she first took several active purgatives, without much benefit; then 6 grains of extract of *cainca*, followed by two stools and three times the quantity of urine previously

passed; on the next day she received 8 grains, succeeded by four actions upon the bowels and profuse diuresis; on the fifth day she took 6 grains more, after a diarrhœa, caused by the first two doses, had subsided; the œdema had lessened decidedly, so that her legs had almost recovered their natural size. On the sixth and seventh days she took 8 grains in two doses, and on the eighth day 10 grains, followed by profuse urination and entire removal of the swelling, so that she left the hospital on the fourteenth day.

CASE 9.—A woman, aged 34, applied at the Hôtel Dieu with dropsy of the legs, which had resisted treatment for six months; she also had sciatica, induced by working in a damp cellar. She took 20 grains of the extract with great reluctance, and quickly vomited it up; then 30 grains were infused in one pound of warm water, followed by six passages from the bowels, attended with colic and profuse diuresis during the whole night and following day, in consequence of which the right leg almost recovered its natural size, while in the left there was only a little œdema visible about the knee and ankle. On the fifth day 30 grains of the extract were given in a clyster, followed by ten watery stools and very profuse urination. Two more clysters were given on the seventh and tenth days, followed by complete recovery from the dropsy, but no relief to the sciatica. The patient was seen in good health eight months afterwards.

CASE 10.—A poor woman, aged 45, had had an attack of dropsy two years previously, which had lasted four months. She now had had dropsy of the legs for six months. On the first day she took 1 drachm of pulv. caincæ in two doses, and on the second and third days the same quantity at one time; on the second day, the urine, which had been red, hot, and scanty, became more free; and on the third day the bowels, which had been constipated, were moved. On the sixth, seventh, eighth, tenth, and twelfth days, she took 2 drachms at one dose, succeeded by increased diuresis and diarrhœa, without colic or other disturbance of the digestive organs, but simply by progressive diminution of the dropsy. On the fourteenth day she took 20 grains of the extract; on the seventeenth day 12 grains, and finally a concluding dose of 16 grains. On the seventeenth day she had ten watery stools, attended with profuse urination. She was now able to walk quite well and briskly, as the dropsy was almost completely removed. The recovery was complete.

(To be continued.)

*The General Hospitals of Paris.* From the French of BOUCHARDAT.

The *general hospitals* are designed for persons of both sexes laboring under *acute* diseases, and for those who have been injured or attacked with surgical diseases. All that is necessary to secure admission is the fact of being affected with a curable malady, and the patient is cared for until the cure is perfect. These hospitals are Hôtel Dieu, Lariboisière, La Pitié, La Charité, Saint Antoine, Beaujon, Cochin, and Necker. The physicians, besides, in each hospital, in turn have gratuitous consultations.

HÔTEL DIEU.—This is probably the oldest hospital in Europe. It is generally admitted that it was founded about the year 600, by St. Landry, Bishop of Paris, and that Erchinoald, mayor of the palace, contributed largely to the good work. Philippe-Auguste, St. Louis, Henry IV., and other charitable persons, amongst whom may be mentioned Chancellor Duprat, M. de Pomponne, and M. de Bellière, first president of the parliament, contributed much towards its enlargement.

Hôtel Dieu was established for the sick, of every age, sex, condition, country and religion. Its motto was, *Medicus et Hospes*. At every hour of the day and night they received the sick, pilgrims and mendicants; no rule existing for their admission or departure. The old population of Hôtel Dieu seemed to bear no relation whatever to the extent of its walls and number of its beds; thus, during the first eleven centuries of its existence, the slightest indication of disease among the people would bring in such a crowd of people that one can scarcely credit the accounts when the size of the place is considered. In ordinary times the increase of its population was as follows: in the reign of St. Louis, 900 patients; of Henry IV., 1,300; of Louis XIII., 1,800; of Louis XIV., 1,900. There were years when the population seemed to be unlimited. In 1709 it had increased to more than 9,000; we are assured that in 1693 they were necessitated to put twelve or fifteen sick in the same bed, which induces us to believe that the number of patients exceeded 10,000; the whole number of beds then did not exceed 1,000, of which 600 were large and 400 small. The following paragraph is extracted from the report of Bally, Tenon and Lavoisier, on the ancient condition of Hôtel Dieu:

"On account of want of room, a large number of beds were placed in the wards, and it was customary to put four, five, and even nine patients in the same bed. The dead have been seen mingled with the living. The wards and the passages are narrow, on which ac-

count the air is prevented from renewing itself; light only penetrates feebly, and the air is charged with humid vapors. The commissioners have seen convalescents mingled in the same ward with the sick, the dying and the dead, forced to leave the ward barefooted summer or winter, to respire the air without on the Pont St. Charles; they have also seen a ward for convalescents on the third floor, which could not be reached except by passing through a ward with small-pox patients; the insane ward adjoins that of those unfortunates who have undergone the most cruel operations, and dare not hope for rest in the neighborhood of the mad, whose phrensied cries are heard night and day; often in the same ward contagious diseases are placed along with those which are non-contagious; females laboring under small-pox alongside of those attacked with simple fever. The operating ward, where trephining and amputation, &c., are done, contains, at the same time, those undergoing operations, those who have been operated upon, and those who are waiting for operation. The operations are performed in the midst of this ward; the preparations for the operation may be seen, and the cries of the operated may be heard by the patients; he who is to undergo an operation to-morrow has before him the *tableau* of his own suffering, and if he endures this test, it may be imagined how he can be moved by the shrieks of pain. These frights and excitements are undergone in the midst of the accidents of inflammation or suppuration, to the prejudice of his recovery or the risk of his life. The St. Joseph ward is devoted to *enceinte* females. Good or bad morals, healthy or diseased, all are brought together. Three or four in this condition are placed in the same bed, exposed to sleeplessness, to contagion from a diseased bed-fellow, and in danger of injuring their infants. Females in labor are also placed four or five in the same bed at different stages of labor. One's *gorge* rises at the very idea of such a situation, where they infect each other mutually. The greatest portion die, or go out in a depressed condition. A thousand special and accidental causes are added each day to the general and constant causes of corruption of the air, and force the conclusion that Hôtel Dieu is the most unhealthy and the most inconvenient of all the hospitals, and that two out of every nine patients die within its walls."

Such was the *Hôtel Dieu* of Paris before the revolution of '89. Let us see by what stages of successive ameliorations it has reached its present condition. The first changes were made in 1790. In that year the slaughter-house, the melting of suet and the moulding of candles, established previously in the hospital, were removed. Some

of the beds were divided by a partition. But during the revolution, and particularly since 1801, the period when the administration of hospitals was placed under the direction of the General Council, the most important changes have been progressively effected. The insane of both sexes were sent to Charenton, la Salpêtrière, and afterwards to Bicêtre. Special hospitals were established for pregnant women, sick children, and venereal patients.

A central bureau was created for the apportionment of the sick. The beautiful Hôpital Saint-Louis was set apart for the treatment of cutaneous diseases. The Hôpital Necker, and those of Cochin and Beaujon, were created. A new assignment was made to La Pitié, and, in later times, the venereal hospital was divided, and the Hôpital des Cliniques established. The ordinary population of Hôtel Dieu was reduced to 1,800, then to 1,200, and afterwards to 800, which is now its published number.

The most important improvements were the following: the definitive suppression of double beds, and the introduction of iron bedsteads with cotton curtains; the classification of patients according to sex, and the creation of medical and surgical wards; the demolition of certain portions of the buildings, and the reconstruction of the whole; the formation of special dormitories for the male and female attendants in the wards; the successive perfecting of the system of warming; the establishment of a double vestibule for each of the four stories of the southern building.

The expenses of Hôtel Dieu were, in 1837, 575,824 francs; the average expense of a patient,  $1\frac{74}{100}$  francs a day, and the cost of each patient 31 $\frac{47}{100}$  francs. The average expense a day has decreased progressively: in 1820 it was  $2\frac{30}{100}$ ; in 1825,  $1\frac{80}{100}$ ; in 1830,  $1\frac{79}{100}$ ; in 1832,  $1\frac{74}{100}$ ; and it is now  $1\frac{27}{100}$ . This is due to the improvement of the *régime*. The expense of each patient has also diminished since the period of sojourn has diminished.

The researches made by Tenon show that, before the revolution, the mortality was 1 for every  $4\frac{1}{2}$ , but in fact the mortality was much greater. Formerly many persons were admitted who were only slightly sick, and others who were not sick at all; the calculation includes all those admitted, although those really sick should have only entered into the calculation. Besides, the deranged and pregnant females were also admitted, and their mortality could not be compared with that of the other patients. The following is the mortality from 1816 to 1856:

1816, 1 in .....	4.47	1829, 1 in .....	6.33
1817, " .....	4.42	1830, " .....	6.87
1818, " .....	5.35	1831, " .....	8.53
1819, " .....	6.07	1832, " .....	5.12
1820, " .....	6.50	1833, " .....	9.96
1821, " .....	7.10	1834, " .....	11.06
1822, " .....	6.82	1835, " .....	10.14
1823, " .....	6.54	1836, " .....	9.35
1824, " .....	7.11	1837, " .....	8.93
1825, " .....	6.95	1838, " .....	9.13
1826, " .....	6.81	1840, " .....	9.13
1827, " .....	6.88	1856, " .....	10.17
1828, " .....	6.89		

In the *ensemble* of hygienic conditions there is no hospital in Paris which is superior to Hôtel Dieu.

**HÔPITAL DE LA PITIÉ.**—This was first a place of refuge for mendicants, established in 1612 by Mary de Médicis. The repairs made at Hôtel Dieu in 1809 obliged the General Council to open a supplementary asylum to the sick. The location of the Orphan-House of the Faubourg St. Victor was changed to the south of the Jardin des Plantes. This house, known under the name of *Nôtre-Dame de Pitié*, was first intended to be a simple appendage to Hôtel Dieu; soon it was made a separate hospital. There were in La Pitié, in 1856, 9,295 patients. The average mortality that year was 1 in 8.76, and 1 in 9.88 in the decennial period from 1845 to 1854. The number of beds was formerly 200; it is now 624. This hospital is composed of several buildings, separated by courts and wide promenades; the plans are beautiful, and most suitable for the purpose; the *ensemble* of the buildings is a long, irregular rectangle. Its principal gate fronts on the Rue Saint-Victor, and several of its wards have a view of the Jardin des Plantes.

**HÔPITAL LARIBOISIÈRE.**—The most modern and best arranged of the Paris hospitals; containing 625 beds. Towards the end of the reign of Louis-Philippe its buildings were begun, and finished under the Republic. It received the name of Madame de Lariboisière, to whose liberality its erection was due. Two systems of ventilation are employed in this hospital; that of aspiration proposed by M. Duvoir, and that of propulsion. The number of patients admitted during the year 1856 was 9,086, while that of deaths during the same year was 883. The average mortality during the period from 1845 to 1854 was 1 in 8.25; in 1855, 1 in 8.35; and in 1856, 1 in 10.28.

**HÔPITAL DE LA CHARITÉ.**—This hospital was formerly under the direction of the congregation of Saint-Jean de Dieu. Marie de



Médicis, at the commencement of the seventeenth century, brought some of the members of that congregation from Italy. She placed them first in the street now called *des Petits-Augustins*, but then *de Petite-Seine*, and a few years afterwards, in 1607, in the place which is still occupied by that establishment.

The Hôpital de la Charité is situated on a small elevation; favoring drainage of the water used in the establishment. The number of its beds in 1790 was only 208. More than one-half of the beds of the patients have been established by private charity. At the commencement of the Revolution it required 12,000 francs to establish one; each patient had his bed; demands for admission were numerous; great recommendations were required to obtain this favor; now it is different, and there is no need of any recommendation; it is only necessary that one should be sick to secure admission. In former times only 200 men were admitted; then 100 women were allowed in addition. At present the number of beds is 424. The number of patients admitted from 1804 to 1814 was 27,454; and it is now about 8,000 a year. In 1855 it was 7,878; the number of deaths in the same year was 721. The average mortality during the decennial period from 1845 to 1854 was 1 in 8.84; in 1855 1 in 8.78; and in 1856, 1 in 10.95.

HÔPITAL SAINT-ANTOINE.—This was opened at the beginning of 1796, in the old abbey of Saint-Antoine, which was founded in the thirteenth century. It was under the direction of the nuns of the order of Cîteaux. It was first known as *Hospice de l'Est*. The decree of the National Convention establishing it is dated January 17, 1795. It simply declared that a new hospital should be opened in the new building of this abbey, and should contain 160 beds. At present it contains 320 beds; this number is not yet sufficient, considering the number of workmen and people in moderate circumstances who inhabit that faubourg. It is indispensable in a quarter so populated with poor laboring men. The hospital, however, is one of the most beautiful, healthy, and best arranged for every service.

The number of patients received from 1804 to 1814 was 21,860; during 1856 it was 5,753; and the number of deaths during the same year was 503. The average mortality during the decennial period from 1845 to 1854 was 1 in 9.99; in 1855, 1 in 8.18; and in 1856, 1 in 11.35.

HÔPITAL NECKER.—The house used by this hospital was formerly occupied by the Benedictines. The king decreed in 1779 an annual sum of 42,000 francs to establish a hospital with 120 beds, and Mad.

Necker was charged with it superintendence and direction. She hired, for 3,600 francs a year, the convent at the extremity of the Rue de Sèvres. The house at first was called the hospice of the parishes of Saint-Sulpice and Gros-Caillou. During the Revolution it was called *l'Hospice de l'Ouest*. It now bears the name of the charitable female whose cares and benefactions made her its true founder.

Large additions have been made to the Hôpital Necker, and successively four blocks of buildings have been erected. These buildings contain 400 patients. From 1804 to 1814, 11,074 patients were admitted. More than 7,000 patients have been received in a year. During 1856 the number admitted was 7,563, and the mortality 790. The average mortality for the decennial period from 1845 to 1854 was 1 in 8.30; exactly the same average for 1855; and in 1856 it was not more than 1 in 9.55.

HÔPITAL COCHIN.—This hospital, situated at the southern extremity of Paris, bears the name of its founder, M. Cochin, who was for a long time *curé* of *Saint-Jacques du Haut-Pas*; he was satisfied with naming it from the quarter where it was located. The council of the hospitals believed it proper to give it the name of its founder, and there was ordered to be placed in the principal hall the marble bust of this venerable friend of the poor. The hospital was only intended at first for 38 patients; it now contains 125 beds. Funds have been lately voted for its enlargement, but the want of solidity in the soil has not allowed the construction of buildings.

The number of entries from 1804 to 1814 was 11,636. Nearly 2,000 are now admitted per year; during 1856 it was 1,964, and the number of deaths 161. The average mortality has been, during the decennial period from 1845 to 1854, 1 in 10.20; in 1855, 1 in 9.62; and in 1856, 1 in 12.21.

HÔPITAL BEAUJON.—This hospital was founded by M. Beaujon, in 1780, some years before the Revolution; it was intended to receive 24 orphans—12 boys and 12 girls—from the parish of Roule. Six places have been assigned for children in particular, but the intention of the founder was soon disrespected, and it was converted into a hospital for the sick. The Hôpital Beaujon was constituted by a decree of the National Assembly, January 17, 1795. The number of beds has been successively raised from 140, to 220 and 300, and through the elegant buildings afterwards erected, the number has been raised to 500. This limit is wise, since this quarter and the neighboring villages have increased so rapidly, that but a small portion of the patients can be received which are presented at the consulting-

rooms of this hospital. The arrangement of the new wards of this hospital is a model worthy of imitation. Its large halls are ventilated by two systems: that of M. René Duvoir, the method of aspiration, and that of Dr. Van Hecke, which combines aspiration and propulsion.

From 1804 to 1814 it had admitted 13,739 patients. The number admitted during 1856 was 6,118, and the number of deaths 663. The average mortality in the decennial period from 1845 to 1854 was 1 in 8.10; during 1855, 1 in 7.27; and in 1856, 1 in 9.37.

L. H. S.

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*Zoster.* By Dr. J. BIERBAUM. (Translated and condensed by C. A. HARTMANN, M.D., Cleveland, Ohio.)

Two forms can be distinguished: one with fever, the other without. The latter is the more frequent. The fever, when present, is of an erethetic character; it may disappear with the outbreak of the eruption, or continue afterwards. Usually, the eruption is preceded for two or three days by lassitude, headache, diminished appetite, chilly sensations, and slight vascular excitement. Nausea, furred tongue, a bitter taste, and yellow urine, have also been observed among the precursory symptoms. The spots which are about to be covered by the eruption appear hot, burning, and prickling. They become covered with vesicles sometimes within twenty-four hours. These vesicles contain a fluid at first transparent, but growing turbid after some time, and are surrounded by a dark-red halo. In severe cases, the whole surface of the affected part is apt to assume the same color. Appearance, efflorescence, decline, and incrustation, constitute the different stages of the eruption. It occurs on the abdomen, chest, neck and arms; in by far the most cases on one side only, although it has been found encircling the body. In seven out of ten cases the right side of the body was affected, and in six of the seven, the chest. A certain resemblance to other febrile eruptions cannot be denied; zoster, however, differs from them in not being contagious; and from erysipelas, with which it has been often confounded, in not being connected with bilious symptoms, and not apt to return. It must be considered as a herpetic disease, constituting a separate species.

The diagnosis rests on the vesical form of the eruption; the regularity of its development ending with incrustation, and the limitation to a certain number (eight, fourteen or twenty two,) of days. With rare exceptions, the eruption is always arranged in a semicircle, not

exceeding the central line of the body. The face and the lower extremities are never affected by it.

Among the predisposing causes, age seems to deserve a place. According to Schoenlein and Bateman, young persons between the years of twelve and twenty-four are commonly the sufferers; but the author has seen the disease also in children of six, eight, and nine years, as well as in persons between fifty and seventy years. Neither sex nor constitution manifests a demonstrable influence. Summer and fall are said to be the seasons of zoster. Of nine observed cases, six occurred during March, September, October and December; three only in May and July. The pectoral form is stated to be more frequent in winter; the abdominal variety in summer. This seems to be correct. There is no evidence that hygienic neglect or atmospheric changes have any connection with the disease, nor is anything known about its epidemic appearance. Cold, anger, functional disturbance of the skin, and other presumed occasional causes, seem to be accidental. In most cases the immediate cause cannot be ascertained.

The disease always ends in recovery. Where death has been reported, the diagnosis was erroneous. The most troublesome symptom is the burning pain which deprives the patient of rest and sleep. Although usually enabled to be around, some patients are confined to the bed for three and more weeks. If ulceration and violent pains occur in aged individuals, a considerable prostration is inevitable.

The fact that zoster, like the eruptive fevers, runs a certain course, does not exclude treatment entirely. Internal remedies may not be necessary in simple eruption without fever; they cannot be dispensed with in the febrile form. The fever itself gives no therapeutical indication. Venesection is forbidden by the character of the disease, and the old treatment with cathartics and diaphoretics cannot be approved. Where the bowels do not move sufficiently, they may be assisted by such agents as the phosphate of soda, Rochelle salt, or lenitive electuary. Spontaneous perspiration ought to be sustained. Biliary symptoms require a saturated solution of carbonate of potassa, or acetate, or carbonate of soda. Neuralgic pains of the head and arms yield to Dover's powder. The vital powers are to be supported in aged patients, when prostration threatens from long loss of appetite, violent pains, or ulceration. Schoenlein well remarks, that sharp pains in the chest, with oppression and palpitation of the heart, furnish no indication for blistering. In violent colic and vomiting the same precaution is useful. Some anodyne fomentation, cataplasm, or embrocation may be proper. The oil of poppy brushed over the erup-

tion is a good topical application. Incision of the vesicles, as well as the application of irritating ointments, only promote ulceration. Where this occurs from external irritation, the zinc-ointment is serviceable.—*Journal fuer Kinderkrankheiten*.

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*A Case of Epilepsy, Trephined.* By H. G. LEIGH, M.D., Petersburg, Va.

William Bird, free negro, black, aged forty years, married, received a blow from a brick about two years since, which caused a slight depression in the anterior inferior angle of the parietal bone, on the left side. He states that he was insensible for some time after receiving the blow. The wound healed up without much trouble. He had been healthy up to the date of the blow. Since then he has been subject to epileptic seizures, returning every few weeks.

He has been treated by various physicians, in various ways—bled, cupped, leeches, and salivated; from all of which he derived no benefit.

He came to the Petersburg Infirmary on February 16th, having had a recurrence of the epileptic fits every two weeks for the last two months.

There was an evident depression in the anterior inferior angle of the parietal bone of the left side. He was put upon low diet, and ordered a mercurial purge every third night. The fits returned regularly, every two weeks.

March 10th, he was operated on by Dr. J. J. Thweatt, assisted by Drs. Dunn and Leigh, with Galt's new conical trephine. There was a good deal of hæmorrhage, requiring the ligature of two small arteries. The trephine proved to be far superior to the old one, now in general use. The membranes of the brain were not injured in the least; in fact, they cannot be hurt with this instrument. He was trephined over the anterior inferior angle of the parietal bone, immediately over the middle meningeal artery, which could be seen very plainly after the operation.

After taking out the button of bone, the wound was brought together with adhesive straps, and water dressings applied. That evening he had a slight fit, which lasted only a few minutes. The wound healed up by first intention. He has had no sign of an epileptic seizure since the evening of the operation.

We would recommend Dr. Galt's conical trephine to all operators, in place of the old instrument.

# QUARTERLY REPORTS ON MEDICAL PROGRESS.

## REPORT ON THE THEORY AND PRACTICE OF MEDICINE.

By MARK BLUMENTHAL, M.D.

### I. ALIMENTARY CANAL—DYSENTERY.

- (a.) *On the Employment of Perchloride of Iron in.* By Dr. AUG. BAUDON. (Bulletin Gén. de Thérapentique, Nov. 30th, 1861.)
- (b.) *Recent Observations on the Employment of Nitrate of Silver in.* By Dr. L. GROS. (Ibid.)
- (c.) *Epidemics of—in Paris and the Provinces during the Months of August and September.* By Dr. EMPIS. (Gaz. des Hôpitaux, Nov. 31st, 1861.)

### II. LUNGS—TUBERCULAR PHTHISIS.

*On the Diseases Produced in Watchmakers by Copper and the Absorption of Cuprous Molecules.* (Rev. de Thér. Médico-Chirurgicale, December, 1861.)

### III. KIDNEYS—DIABETES.

*A New Clinical Method of Estimating the Quantity of Sugar in Diabetic Urine.* By Dr. WM. ROBERTS. (Edinburgh Medical Journal.)

### IV. FEVER—TYPHOID.

- (a.) *Memoir on—read before the "Medical Society of Emulation," of Paris.* By M. CAZALAS.
- (b.) *Paper on—read before the Egyptian Institute of Alexandria.* By Dr. B. SCHNEPP. (L'Union Méd.)
- (c.) *The Thermometer as a Means of Diagnosis in.* By Dr. WUNDERLICH. (Medical Times and Gazette.)

### I. Alimentary Canal—Dysentery.

Dysentery, always a grave disease, at certain seasons and during certain epidemics, becomes frequently fatal. Notwithstanding that its pathology is well understood, and its lesions characteristic, its treatment is by no means so well known, nor as rationally based in the minds of the profession at large, as could be wished. The natural result is, that we constantly meet with new remedies suggested, or old ones revived. There is, it is true, ample cause for further search of curative means, for it is not to be denied that many cases, particularly in children, seem perfectly uncontrollable from the beginning. In this view, we subjoin a few practical facts, the results of experience, as brought to us at recent dates.

(a.) Dr. Aug. Baudon states that he has treated a dozen very severe cases of dysentery, characterized by tenesmus, prolapsus ani, bloody stools, 20, 30 to 40 a day, and extreme prostration, by the exhibition of the solution of perchloride of iron, in doses of from 12 to 30 drops in twenty-four hours, in a vehicle of water and syrup; at the

same time administering two or three warm-water enemata, daily, containing from 12 to 25 drops of the solution, with the addition of laudanum when much pain exists. Five of the cases were children from one to ten years of age, four women, and three men. All of them recovered. His patients were under treatment from four to eight days. These results are exceedingly satisfactory, and if they shall be substantiated by further experience, well worthy of adoption and imitation.

(b.) In the same journal, M. Gros relates eight cases of dysentery, in which he employed the nitrate of silver, chiefly in injections. After trying narcotics and emollients from three to five days, the patients gradually growing worse, he used the solution of nitrate of silver, in weak doses, with the best effects. In order to test the matter conclusively, after having controlled the bloody discharges, he ceased the use of the solution, and reverted to narcotics, &c.; but the serious symptoms again returning, the doctor recurred to his silver, and at once controlled the affection.

The immediate effect of the nitrate was to stop the bloody discharges and tenesmus. The pain also was relieved by its injection, whilst simple warm-water enemata always increased it. Whenever the injections did not at once produce the desired result, the nitrate was administered by mouth, in the form of pills. Dr. Gros ascribes the advantages of pill and enema respectively to the location of the dysenteric lesions. Thus, where the pain and tenderness, &c., were about the sigmoid flexure and rectum, the injections were most efficacious. When, on the other hand, the symptoms indicated that the lesions were situated higher up in the transverse or ascending colon, even as high as the ileo-cæcal valve, the administration of the pill, or by way of the stomach, was most satisfactory. When the entire colon and rectum appeared to be involved, the combination of the two means proved desirable.

The treatment of dysentery by nitrate of silver, by no means new, thus receives corroborative support from French physicians, after having been long since recommended and practiced by English and American practitioners. Dr. Gros very judiciously adds, that this treatment is by no means to exclude other means; and, above all, quiet in bed, and great care in the regulation of diet, are essential concomitants.

(c.) This method of treatment has received still further support in the experience of Dr. Empis, physician to several Parisian hospitals, who reports the results thereof, as verified both in public and private



practice during the prevalence in that city and suburbs of diarrhœa and dysentery during the months of August and September last. "During the first weeks of August," says Dr. Empis, "the epidemic (being then at its beginning) consisted chiefly of catarrhal diarrhœas, accompanied by a great degree of weakness; later, towards the end of August, and all the month of September, the epidemic had changed its character; it was no longer diarrhœa, but veritable dysentery; sometimes mild, but most frequently very grave. The degree of debility which prostrated the patients from the beginning was remarkable, accompanied by vertigo and profuse sweating. This debility could not be explained by the number of diarrhœic discharges, because it bore no relation or proportion to them; some patients, in whom the discharges were very few and slight, were so reduced as to remain in this depressed condition for more than a week after the cessation of the evacuations."

In further describing this epidemic, the doctor says: "The tenesmus and burning sensation about the anus were the only painful symptoms. There was no colic either before or after the evacuations. The abdomen was soft, not tympanitic, nor did palpation produce pain. This dysentery was essentially without fever—apyretic and adynamic; the patients were depressed, prostrated; there was great tendency to chilliness in the serious form; the skin became wrinkly and slightly cyanotic; the physiognomy was much changed, the eyes becoming horny, and losing their expression. The pulse was generally small, compressible, and in severe cases, unequal; the tongue simply whitish; the progress of the disease very rapid. At the height of the epidemic, death occurred from the fourth to the seventh or eighth day. In those which recovered, the disease had a duration of six or eight days in the lighter, but rose to fifteen or twenty days and over in graver cases."

Post-mortem examination revealed in all the cases the dysenteric lesions, occupying solely the large intestine, the disease having always commenced in its lower portion, and extended upward; so that while well-defined inflammation of the follicles and mucous membrane, and even ulcerations, were found below, a sort of follicular eruption simply occupied the upper, transverse, and ascending colon and ileo-cæcal valve, most marked upon the projecting folds of the mucous membrane."

It was in this epidemic that, after having employed opiates, emollients, astringents, bismuth, vesicatories, &c., Dr. Empis, finding two of his patients sinking into an adynamic condition presaging early death, resorted to the use of nitrate of silver pills, (10 ctgr. in each

pill,) giving one every four hours, with the most satisfactory results; and being thus encouraged, he at once prescribed it in two other cases, with the same effect; all these four patients being quickly placed out of danger. Having thus tested the efficacy of the remedy in the most advanced stages of dysentery, Dr. E. now employed it in others as soon as bloody evacuations appeared, and thus far has had reason to be exceedingly pleased with the results. In fine, M. Empis believes, 1. The efficacy of the remedy to be undeniable. 2. That several of his patients owe their lives to it; and 3. That it is the best remedy he employed during the epidemic.

## II. *Lungs—Tubercular Phthisis—Prophylaxis.*

Besançon, in France, is a great watch manufacturing town. There are upward of three hundred workshops, with over three thousand persons employed therein engaged in the making of watches. The polisher, the replacer, the finisher, the engraver, all continually manipulate metal, either gold or copper, of which particles are absorbed into the system either by the lungs or through the skin. This absorbed copper causes certain gastric symptoms, (to which Dr. Perron called the attention of the Medical Society of Besançon.) They constitute complete poisoning of the system by copper, and the continued exposure of the workmen injuriously affects their health, and strongly predisposes them to tubercular phthisis. Hence all mechanical manipulation of copper should be interdicted to those persons having a tendency—either hereditary or accidental—to such disease. "They should have much outdoor exercise, and employ frequent evacuations and sudorifics. To guard against the effects of working in these shops, they should be daily well ventilated, while the employees should strictly observe cleanliness, bathe frequently, use succulent aliments and tonic drinks, and wear moustaches."

The aggregation of many individuals in a confined space is, under all circumstances, prejudicial to health; if now we add the inhalation of metallic particles, the condition of affairs is certainly not improved thereby, particularly where the organs of respiration are subject to suspicion. Whether, however, the absorption of the cuprous particles more than those of any other metal is injurious, and tends to excite phthisis pulmonalis, is open to question. All influences that destroy the powers of digestion, or depress the general system for a length of time, must be considered as tending to develop lung disease, particularly where these organs have some hereditary taint.

III. *Kidneys—Diabetes—Test for.*

Everything that tends to benefit the patient, or render less difficult the obstacles the physician has to overcome, is of importance to the practitioner; and when at one and the same time we can gain positive information regarding the nature of a disease, and also an exact estimate of its intensity—with the means of measuring its daily increase or diminution—we should certainly avail ourselves with avidity of such desirable assistance, and acknowledge with gratitude the favor conferred. Dr. Wm. Roberts, Physician to the Manchester Royal Infirmary, has placed us under obligations by the publication in the *Edinburgh Medical Journal*, for October, of "A New Clinical Method of Estimating the Quantity of Sugar in Diabetic Urine." It is true we have had means of discovering the presence, and estimating the quantity, of sugar in urine long since, but none so simple, so satisfactory, so conclusive, and so easily within reach of every one. It is this last quality of the test that must peculiarly recommend it to the general practitioner. "The only instrument required is the urinometer (with the use of which every practitioner is familiar) and two phials, one of twelve ounces and the other of four. The principle of the test is most simple. *It is to take the specific gravity of the urine before and after fermentation, and from the loss of density occasioned by the conversion of sugar into carbonic acid and alcohol to calculate the amount of sugar destroyed.*"

"The analysis of diabetic urine by this method is thus performed: About four ounces of the urine are poured into a twelve-ounce phial, and a lump of German yeast, of the size of a small walnut or so, is added. The phial is then loosely corked, or covered with a slip of glass, and placed on the mantle-piece or other warm place to ferment. Three or four ounces more of the same urine are likewise put up in a companion phial, tightly corked, without any yeast, and placed beside the fermenting phial.

"Fermentation soon begins, and proceeds with such rapidity, that in twenty-four hours not only is the process completed, but the scum and froth are dissipated from the surface, and the urine, though still cloudy, is fit for the second stage of the process—namely, taking the densities. It is advisable, however, to remove the phials from the mantle-piece a couple of hours beforehand, so that their contents may cool down to the general temperature of the room.

"The specific gravity of the two products is then separately observed in the usual way, by pouring the urine into a cylindrical glass vessel, and dropping in the urinometer. The fermented urine

will be found to have suffered a very great diminution of density, ranging from 30 to 40 degrees, more or less, according to the amount of sugar destroyed. This diminution of density holds such proportion to the sugar originally present in the urine, that for each grain of sugar per fluid ounce there is a fall of one degree of density; or in other words, for every degree of density lost, you may count one grain per ounce of sugar in the urine. For example:

Density of a diabetic urine before fermentation, . . . 1040 deg.

Density after fermentation, . . . . . 1002 deg.

Density lost by fermentation, . . . . . 38 deg.

These 38 degrees of density lost, indicate that the urine contained exactly 38 grs. of sugar per fluid ounce, or 740 grs. per imperial pint. This result, too, is identically the same, as can be arrived at by the best other calculations; or if there be any discrepancy, it is so slight as not to affect the result, particularly if the density be taken at 60° Fahrenheit."

The method thus presented to the profession is exceedingly well adapted for general use. The entire examination need not take more than ten minutes. The materials essential thereto are simple and within easy reach, the principle easily understood, and the calculation almost self-made.

A lump of solid German yeast is recommended by the author as preferable, because it yields scarcely any soluble matter to water or urine, and, consequently, does not interfere with its density. The quantity used should be in large excess—to quicken fermentation, as a little more or less does not affect the result; the phial used for fermentation requires to be large, to give room for the fermenting process. The ordinary urinometer answers very well—unless more exact results are desirable—when it should have a long scale, upon which half and quarter degrees are marked. The method thus detailed the author calls the "Clinical Method," and thus sums up the successive steps of the analysis:

"1. Four ounces of urine are placed in a 12-ounce phial, with a lump of German yeast in it, about the size of a walnut.

"2. This is loosely corked, or covered with a slip of glass, and placed in a warm place to ferment.

"3. A companion phial filled with the same fluid—say a 3-oz. phial—is tightly corked, and placed beside the fermenting bottle.

"4. In about 22 hours, when fermentation has ceased, the two bottles are removed, and placed in some cooler part of the room.

"5. Two hours after—24 hours after the commencement of the experiment—the contents of the phial are separately poured into cylindrical glasses, and the density of each observed.

"6. The difference between the two densities is thus ascertained, and every degree of 'density lost' indicates one grain, per fluid ounce, of sugar in the urine."

#### IV. *Fever—Typhoid.*

(a.) The question of the identity or non-identity of typhus and typhoid fevers, though pretty conclusively settled in the minds of most English and American physicians, seems still to puzzle some of our French confrères. M. Cazalas recently read an interesting Memoir before the "Medical Society of Emulation," in which, after premising that he had always believed in the non-identity doctrine, and referring to his extensive fields of observation while in the French armies at home, as well as in the Crimea, Africa, and Italy—he expresses his own conviction, supported by the opinions of his colleagues, who like him had had ample opportunities for observation, that typhus and typhoid fever are "identical in their nature, constituting but one nosological species. Species which changed by the peculiar conditions in the midst of which they are developed, may exhibit an infinite variety, in regard to their symptoms and general anatomy, but in which the forms and complications never lose completely their essential character constituting the species; characters which are everywhere recognizable in the midst of all other diseases, be they simple or complicated, trifling or grave, spontaneous or communicated, sporadic or epidemic, and which are named—typhoid, when simple, regular, sporadic, and spontaneous, and when they appear disseminated, and in previously healthy persons; and typhus, when complicated, irregular, epidemic, when it spreads by manifest contagion among a crowded, cachectic population, or already sick subjects."

Dr. Cazalas bases these conclusions upon what seem to him perfectly undeniable facts: thus he was very often sorely perplexed to say, whether the patient had typhus or typhoid—often diagnosing typhus, when the post-mortem revealed the typhoid lesions—and being confident, on the other hand, of treating typhoid fever, when in the end the autopsy failed to support the theory. He says: "Now, when two diseases, equally specific and alike contagious, develop themselves under the influence of the same specific cause, and are transmitted by the same mode of contagion; when these two diseases cannot be distinguished from each other in practice, either during life

or after death; when they present the same type, the same symptoms, the same progress, the same periods, the same duration, the same forms, the same terminations, the same anatomical lesions, and which demand the same prophylactic and curative means, it is difficult, it seems to me, *to admit that they are different* in nature and species." Dr. Cazalas, in short, "believes it impossible at the bedside, and from the symptoms and progress of the case, to establish a differential diagnosis between typhus and typhoid fever," (!!!) and adduces the names of some half dozen colleagues who confess their want of success in the effort.

(b.) In this connection it may be proper to refer to a paper on Typhoid Fever, recently read before the Egyptian Institute, at Alexandria, by Dr. B. Schnepf, in which he states that typhoid fever presents itself in Egypt in a much less formidable form than in Central Europe; it also runs its course in a shorter period. M. Bruner Bey, a native author, declares that he has never met ileo-typhus in adult natives, nor in negroes; but the natives are not exempt therefrom during childhood, being particularly liable between the ages of 8 and 14 years. Its occurrence among adults is principally confined to strangers. Thus Dr. Griesinger, while treating 1,087 patients in the hospital at Cairo, met but 200 with typhoid affections, and of these but 15 had *typhoid fever*. "The uniform results of post-mortem examinations of those who died of the fever *were some morbid modifications of Peyer's glands.*"

(c.) As a curious and ingenious means of diagnosis in typhoid fever, may be mentioned the *Thermometer*, as proposed by Professor Wunderlich. Starting with the proposition that this disease has two perfectly distinct stages, in the first of which infiltration and exudation occur, and in the second retrogressive metamorphosis, elimination of morbid matter and healing of diseased parts, he believes the thermometer will indicate not the stage alone, but the intensity of the disease, its progress and its probable result. Thus, "within the first week the thermometer is often able to render the diagnosis certain, when other symptoms cannot do so, as the temperature of the skin rises in the following characteristic manner: In the first half of the first week it augments from morning to evening 2.25 degrees Fahrenheit, (1 Réaumur;) and from evening until the following morning it falls 1° 1' Fahrenheit, ( $\frac{1}{2}$  R.) In the second half of the first week the evening temperature remains 103° 3' to 104° and higher, while the morning temperature is 1° 1" lower."

"There is no typhoid fever when the temperature rises to 104°

Fahrenheit on the first or second day of the disease, &c. On the other hand, when the temperature increases every evening—though the symptoms seem light—we may safely assume the existence of typhoid fever. In the second week, whenever the temperature is below 103° in the evenings, there is no typhoid fever," &c.

But we will not follow the subject further, as we hardly think a safe diagnosis or prognosis could be based upon such a test alone. It is a refinement which will never come into general use, though it may be very useful sometimes to assist in the diagnosis. After all, patient examination and study of all the objective and subjective symptoms presented, with conservative practice, such as the thinking portion of the profession now generally follows, will guide pretty safely both in diagnosis and treatment, in this as in all other diseases.

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#### QUARTERLY REPORT ON OBSTETRICS.

By T. GAILLARD THOMAS, M.D.

1. *Rupture of the Uterus in the Fourth Month of Utero-Gestation.* By Dr. W. B. MCKINLAY. (Medical Circular and General Medical Advertiser, Oct. 23d, 1861.)
2. *Cases Illustrative of the Independent Liability of the Fetus to Disease.* By Dr. H. WEBER. (Ibid.)
3. *Extra-Uterine Gestation, continuing without Suspicion of Pregnancy, to the Full Term.* By Dr. GEO. CHEESMAN. (London Lancet, December, 1861.)
4. *Extra-Uterine Fætation of Eight Years and Three Months' Standing.* By Dr. THOS. DAVIS. (Dublin Medical Press, December, 1861.)
5. *Cæsarean Operation.* By Dr. ASHTON. (Medical Circular and General Medical Advertiser, Nov. 13, 1861.)
6. *Induction of Premature Labor.* By Dr. E. A. KINLY. (Ibid.)
7. *Malignant Tumor of the Recto-Vaginal Septum—Extirpation by the Linear Ecraseur.* Reported by Dr. PARMENTIER. (L'Union Médicale, Oct. 19th, 1861.)
8. *Strangulation of the Fetus by the Umbilical Cord.* By Dr. BARTSCHER. (Gaz. Hebdomadaire, No. 45.)

1. "The deceased, B. T., was aged about thirty-seven years, of a robust habit of body, and had always been healthy. Was a farm-servant, but had latterly come into the village for the purpose of taking care of her father, who was an infirm old man. On the day previous to her decease, she had gone by railway to a neighboring village about four miles distant, accompanied by Mrs. W., in whose house she slept. They returned on foot, and called at a farm-house, where they partook heartily of tea, at which they had cheese. During the whole



of that time the deceased was in good spirits; indeed, those who saw her state that they had never seen her more cheerful. On their return home she remained in the house for some time, and between half past eight and ten o'clock went out with a daughter of Mrs. W. and visited some friends. When they returned, she went into her father's house, prepared his supper, milked his cow, and returned to Mrs. W's at about a quarter to eleven o'clock, shortly after which time she retired to bed, not complaining, and seemingly in good health and spirits.

"Shortly after going up stairs to bed, a little girl came down and stated that the deceased was very ill, on which she was seen by Mrs. W. She stated that she was much pained in the stomach and bowels. When asked if she thought she had walked too far, she answered not; she said, however, in answer to a question put to her, that she was afraid of inflammation. At this time she was vomiting. A medical man who was in the house was asked to see her, with which he complied. He examined the vomitings, and having found some portions of the cheese of which she had partaken at tea, he said it was only a disorder of the stomach, and ordered a mustard plaster to be applied over the stomach. She applied the mustard herself, and stated that she felt relieved by it, after which she lay quiet for some time. About half past one o'clock she became worse, and the mustard was a second time applied by herself. When asked at this time if she was pregnant, she would give no answer. Between two and three o'clock a dose of castor oil was administered to her, which she seemed reluctant to take, and on being asked the reason, she said that feeling her stomach a little out of order, she had taken a tea-spoonful of sulphur in her father's house before she came in. This would be between ten and eleven o'clock. The mustard was applied a third time, but no alleviation of the symptoms took place. About four o'clock she was said to have confessed in an ambiguous manner that she was pregnant. Shortly after this she became quiet, and died about a quarter before seven o'clock.

*Autopsy.*—"On laying open the abdomen, the cavity was found to contain a very large quantity of serum, blood, and clots of blood, which, upon being removed, were found nearly to fill a large wash-hand basin. The stomach, which was very much contracted, was carefully secured by double ligature, and removed from the body. Upon being opened, it was found to contain a small quantity of a whitish pulaceous mass, having bits of what appeared to be cheese, and also a number of small blackish particles mixed up with it. The lining

membrane was in several places much reddened. The whole stomach and its contents were carefully placed in a clean glass jar, which was duly sealed, labeled, and preserved for further examination. On laying open the œsophagus and pharynx above the ligature which had been placed upon it, they were found to contain a small quantity of fluid, through which were floating some globules of oil; part of this was removed and carefully preserved. The liver was normal, both with regard to size and appearance. The pancreas, spleen, and kidneys were of a natural appearance. The duodenum, with its contents, were removed, for further examination. The rest of the bowels were generally pale in color, and at no part was there the slightest appearance of inflammation.

"Projecting from the pelvis there was a large tumor, covered with clotted blood. This, upon careful examination, was found to be the uterus, partially protruding through a rent in the fundus of which, there was found a foetus apparently about the fourth month of uterogestation, covered with its proper membranes. The foetus was carefully removed, without dividing anything but the membranes and the umbilical cord, when the rent was found to be entirely across the fundus, and measured transversely four and a quarter inches, and in an antero-posterior direction it measured three and a half inches. The uterus at the rent was normal in structure, and at no part was there any appearance of disease."

2. "CASE 1.—Mrs. G., a young woman, vaccinated in early life, called me in to attend her during parturition, she being at the time in perfect health, in all respects separable from the parturient condition. She was delivered, after a common-place labor, of a full-grown live male child, covered with the eruption of variola in the fully-matured pustular stage of the disease in its discreet form; on the second day, however, the disease became universally confluent, and the infant ultimately died with convulsive symptoms. During the first four days following its birth, the health of the mother continued to warrant the hope that she was about to escape—a hope which I based upon the fact of her previous vaccination; this, however, turned out not to be the case, as on the fifth morning papule became apparent, and she eventually went through, and recovered from, a pretty severe attack of the disease.

"This case, which I have had in my note-book for some months, offers no points of difference from those related by Jenner, Mead, and Mauriceau as having happened in his own person, of a nature to constitute additional evidence on the subject; still, I think it may be fairly asked, bearing in mind the long apparent precedence of the disease in

the child, whether it does not excuse the dictum of the author who affirmed that disease of the ovum is more injurious to the mother than is maternal disease to the ovum.

"CASE 2, which came under my observation very lately, is, however, much more to the purpose, and indeed is as conclusive as any single case can well be.

"A poor woman, the wife of an artisan, but living under unusually favorable conditions as to light, ventilation, and cleanliness, and from whom subsequent inquiries elicited that she had never been subject to any form of skin disease, applied to me to attend her during her confinement. The child was born with a beautifully-marked eruption of herpes zoster, extending from the central spinal line across the angle of the right scapula, and round to the anterior mesial line of the ensiform cartilage. This followed the usual course of the disease, lasting about five days, and leaving, therefore, the presumption in my mind that it must have existed for at least an equal time in utero. Subsequent examination of the mother gave no trace of a similar condition in her; neither was it possible to establish any remote connection between it and external causes, by discovering an herpetic eruption on the genitals of either of the parents. Nor was it possible to attribute the appearance to the pemphigoid eruption of the French authors, the result of the syphilitic cachexia, as the history and general appearance of parents and child were opposed to the supposition, and the form and grouping of the vesicles, the uniform width of the band of eruption, its seat, the healthy condition of all other portions of the skin, and the spontaneous decline of the disease, were sufficient evidences of its nature."

3. In this article Dr. Cheesman describes a case of tubal pregnancy in a married woman, about 40 years of age, who had before borne four children. He saw her eleven months after conception, when not the slightest suspicion of her state existed in the mind of any one, her physician regarding the case as one of abdominal dropsy. On making an autopsy, the following evidences of the nature of the pregnancy were discovered:

"When the peritoneum was cut into, a large quantity of most offensive gas escaped, so as very considerably to reduce the size of the abdomen. A distinct movable tumor could now be felt within the abdomen, which might have been taken for the gravid uterus. After a large incision was made, the body of a full-grown fœtus was exposed, lying transversely under the great omentum, with its head towards the right side. By following the funis, the placenta was

found, nearly normal in appearance, manifestly involved in a dilatation of the left Fallopian tube. The uterus was found pressed down towards the right side of the pelvis. The uterus was about the size of a child's head, and its walls were thickened to the extent of two inches and a half, its substance exhibiting a fibrous character; the lining membrane presented a congested appearance. Beyond this lining membrane there was nothing in its cavity. The os uteri was dilated. The right Fallopian tube was normal in character. The body of the fœtus was distended with gas, particularly the head, which, from this cause, presented a hydrocephalic appearance. A large quantity—nearly two gallons—of a dark grumous fluid, with flakes of coagulable lymph, was found in the cavity of the abdomen, and dark gangrenous patches were observed in several places on the peritoneum."

4. The Doctor's suspicions were awakened as to the nature of the case by the following history:

"Five years previously she had been in the family-way, and about the time she expected her confinement she received a great shock, through hearing that a policeman had fallen dead near the barracks, and her husband being out at the time she supposed it to be him; that for several days following she had fainting-fits, and since then the dead child remained in her womb without causing much inconvenience."

The following physical signs convinced him of the correctness of the view, and led him to the performance of an operation for removal of the fœtus.

"On examining the abdomen, the outlines of the fœtus can be easily detected about two inches below the umbilicus, the great bulk of it being towards the left side. The integuments covering it are red, and in one place the fluctuation of matter is perceptible. The patient is greatly emaciated, and has the usual symptoms of hectic fever. The case at this period was seen by Dr. Wallace, of this town, and Dr. Hozier, of Cliffoney, and an operation for the removal of the fœtus was proposed, but the patient would not submit to it, so we could only recommend poulticing, and supporting the strength with wine and porter. In the course of a few days the abscess burst, giving exit to a large quantity of fœtid pus, of a dark color, and after a day or two more a bone protruded and was removed, which proved to be the fibula of an apparently full-grown fœtus. The strength of the patient continued to give way, and on the 14th October, when, from her weak state, I considered her case almost hopeless, 'she consented to have the offending mass removed.' There was then two

inches below the umbilicus the sinus through which the fibula had passed, and on a line with this, about four inches distant towards the spinous process of the left ileum, a second sinus. I had therefore merely to connect the two sinuses by a transverse incision, when a black, or rather gray-colored mass, presented itself, the smell at the time being almost insupportable. On grasping this mass, it proved to be the breech, the back being towards the parietes of the abdomen. By gentle traction the body came easily until the arms reached the opening, when it required considerable care and manipulation to get them through without separating them from the body. After succeeding in doing so, I found the head would not move, and with very little force it separated. I had now before me the headless trunk of a full-grown fœtus, which, considering the fact that it was upward of eight years dead, was in a remarkable state of preservation. The woman did not appear to have suffered thus far, so I gave her a little whiskey and water, and introduced my hand into the cavity for the purpose of removing the head. This I found had broken down more than the other parts, it had therefore to be removed piecemeal, and this required the introduction of the hand either three or four times; thus I had an opportunity of feeling that the cavity in which the fœtus lay was lined throughout by a strong membrane. After the removal of the fœtus I endeavored to dry the cavity with cotton, but this I could not succeed in, as pressure on different parts of the abdomen caused a fresh flow of reddish purulent matter. The wound was therefore covered with cotton, and a binder passed round the abdomen."

The patient recovered.

5. *Cæsarean Operation*.—At a meeting of the Edinburgh Obstetrical Society, Professor Simpson showed the pelvis of a woman on whom the Cæsarean section had lately been performed, by Dr. Ashton, of Preston, who had been kind enough to send him the preparation, along with the following history of the case:

"I may shortly state, that when I arrived at the house where my patient resided, I found that labor had commenced between one and two o'clock in the morning, accompanied with hæmorrhage; and on examining her, I found that her underclothing was saturated with blood, and small clots of blood lay about the thighs and in the vagina. On introducing the finger, I felt what appeared to be the child's head, with the scalp tumefied in the cavity of the pelvis, and extending to a length of from two to three inches, between it and the left os pubis, a soft substance having the feel of the placenta. I

thought it to be a case of placenta prævia, and I began to introduce my hand with the intention of turning, but I could not possibly get the knuckles to pass between the ischia. I may say that I have had occasion to turn in several cases of placental presentation, and many times in mal-presentations. The partial introduction of the hand enabled me to see the true nature of the case, and that the hard substance, which felt like the child's head, was the promontory of the sacrum, and, as it afterwards proved, the last lumbar vertebra covered by the internal integument, greatly swollen from the pains, pressing the child upon it above. The part which felt like the placenta was the posterior lip of the os uteri. I feel confident that any other practitioner would have formed the same opinion at a first examination, the resemblance being so like a vertex presentation, pressing the edge of the placenta and anterior lip of the os uteri against the pubis. The introduction of part of the hand brought on *very strong* expulsive pains; and I could just perceive, with the tips of the two fingers, the membranes through the os uteri. As the flooding continued between the pains, I made a strong effort to rupture the membrane; with some difficulty I succeeded, and the flooding ceased. I sent for Dr. Halden; and I have given at length, in my account to the *Lancet*, our reasons for deciding on the operation, which was performed under chloroform, in from sixteen to seventeen hours after the commencement of labor. The os uteri was fully dilated, I believe, when I ruptured the membrane, six and a half hours before the operation was commenced, and I think it had been so for some time; but it could only be felt as a long narrow opening. Although the strongest pains I think I ever witnessed continued during that time, at intervals of from five to ten minutes, not the slightest portion of the presenting part entered the brim. I could, from my hand being smaller than Dr. Halden's, just reach with the tip of the finger, but he could not feel it. She lived about twenty-five hours after the operation, and sank from internal hæmorrhage; there being a quantity of blood, which half filled a chamber utensil, lying in the lower part of the abdomen."

6. *Induction of Premature Labor.*—Dr. E. A. Kirby read a paper before the Royal Medical and Chirurgical Society, in which he gave the history of a case in which he had twice induced premature labor on a dwarf of singularly small stature and ill-development. When first seen she was twenty-seven years of age, had been married twelve months, and completed her thirty weeks of uterine gestation. On examination, the spinal column and pelvis were found to be greatly

distorted, and premature labor determined upon, the time chosen being the thirty-second week of gestation, but was delayed for a week owing to the patient suffering from bronchitis, and was only completed about the thirty-fourth. Induction of labor was commenced on January 30th, and she was delivered on February 7th. On rupture of the membranes, the elbow was found in the vagina, and the shoulder resting on the brim of the pelvis, the child lying transversely. Version was performed, and the little patient delivered of a living child. In this case about two ounces and a quarter of ergot were employed with the most useful effect, and without occasioning the least bad symptoms to mother or child. A few months later she again became pregnant, but owing to the lateness of her application the child was lost. Her first child had by this time grown nearly as tall as herself. The author laid great stress on the superiority of this operation to craniotomy, in which one in five mothers die, while in the induction of premature labor only one in fifty dies, and half the children are saved. The success, he thought, greatly depended on keeping the membranes entire until the os uteri was fully dilated.

7. The morbid mass protruded considerably into the vagina, where it formed a very convex prominence in the vertical and transverse side; the posterior half of the circumference of the vagina was entered. The vaginal mucous membrane covered the tumor again, adhering to it; it was also perforated in a point where there was an ulceration as large as a fifty-cent piece.

As the constitution of the patient was excellent, the tumor was far enough from the peritoneal prolongation to make the removal of it possible; and, moreover, the pains were becoming greater, and considering that the development of the disease threatened the patient with an anal obstruction, with retention of its contents, M. Verneuil proposed an operation, which was accepted, and performed in the following manner:

The patient, being under the influence of chloroform, was placed on the left side, on the edge of the bed, in the attitude customary for fistula in ano. A univalve speculum was introduced into the rectum and intrusted to an assistant; then, after having ascertained the superior limits of the tumor with the left forefinger introduced into the vagina, the operator conducted with the finger a large bent trochar, with which he penetrated the recto-vaginal partition, at one centimeter above the tumor; and as it extended more to the left than the right, he made the puncture to the right, to make immediately a vertical section corresponding with the right side of the tumor.



After withdrawing the trochar, the chain of the ecraseur was carried across the siphon; then, after having superficially cut the skin from the right side of the anus to the reunion of the third of the posterior with two-thirds of the anterior of the large lip, M. Verneuil made a vertical loop with the chain of the ecraseur, and on compressing four notches every minute, the first section was done in sixteen minutes; the wound remained all the time bloodless.

The tumor was drawn down by three hooks, then confined by the chain of a bent crusher, and, after having cut the skin, the section was commenced. At the end of seventeen or eighteen minutes the morbid production was completely detached: it was an *epithelioma*.

In carrying back the finger to the most distant part of the vast excavation which resulted from this operation, M. Verneuil discovered on the sides of the rectum two indurated points, which appeared suspicious. These two tumors were drawn out with a double hook; a waxed thread served to form an artificial pedicle, on which the chain of the ecraseur was thrown; at the end of three or four minutes one of the tumors was taken away, but the other was extirpated with the bistoury, because the hook was contained in the loop, and it was impossible to detach the instrument. This abstraction produced a flow of blood more abundant than all the preceding operation, for three small arteries furnished the blood. A ligature thrown immediately on the largest of the three vessels, and the compression exerted with the finger on the two others, soon caused the hæmorrhage to cease. The termination of the case was most favorable.

8. Madame G. had been safely delivered of four children, who all presented a tight rolling of the umbilical cord around the neck. The cord was, besides, 22 inches long.

The first period of her fifth pregnancy passed without accident. At the end of the seventh month, Madame G. felt a violent pain, transient, however, in the right lumbar region. At the same time, the fœtus moved with a singular degree of energy. The pain ceased in a few days, but the motion of the child ceased at the same time.

During ten or twelve days, Madame G. experienced an inconvenient weight in the lower part of abdomen, great lassitude, nausea, and repeated chills. These symptoms continued to increase for several weeks, even to the end of her pregnancy.

The labor was tedious. The waters were very abundant, and emitted a fœtid odor. The child was dead, softened, and deprived almost entirely of its epidermis. The head was exceedingly large.

The umbilical cord was 25 inches long; it contained very little of

Wharton's gelatine, and presented in several parts a gangrenous appearance. After having twice gone round the neck, it formed several very tight knots. The compression of the neck had been so violent that the soft parts were found tightly glued against the vertebral column. The putrefaction of the child was too much advanced for an autopsy to give any farther interesting results.

We must remark, that the painful sensations were suddenly experienced by the mother at the moment, undoubtedly, when the child, tied by the neck, performed violent movements, which were communicated much more easily to the womb, since the twisted cord had become too short. This circumstance, joined to the sudden cessation of all motion, may assist in the diagnosis, although uselessly, it is true, for the mother and child.

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*Report of a Committee of the Associate Medical Members of the Sanitary Commission on the Subject of Venereal Diseases, with special Reference to Practice in the Army and Navy.*

It is in the highest degree gratifying to be able to assert, upon the authority of the reports of the surgeons of the United States Army now in the field, that in modern times there has never been collected so large a body of men, among whom venereal diseases have prevailed to so small an extent. Since, however, this class of diseases is still a fruitful source of the disqualification of men for active service, the following attempt has been made, at the request of the Sanitary Commission, to embody, in as brief a space as possible, the teachings of modern science upon this subject, with special reference to the wants of army surgeons.

SECTION I. *Prevention of Venereal Diseases.*—The following regulations, enforced in the Belgian Army, have been found by experience to render venereal diseases "by far less frequent." So far as practicable, they are worthy of adoption in our own army.

1. Every soldier who contracts venereal disease should be required to give the name and address of the woman who infected him; and if, upon examination, she be found diseased, her removal from the neighborhood should be enforced by the military authority.

2. Every inducement should be presented to lead men to report themselves at the earliest possible moment after infection; and delay should be visited with appropriate penalties.

3. No person with any venereal disease, however slight, should be allowed to remain in quarters, but be at once transferred to the hospital.

*Three Forms of Venereal Disease.*—There are three separate and distinct venereal diseases—viz., Gonorrhœa, the Simple Chancre, or Chancroid, with its attendant bubo, and Syphilis, including the initial

lesion, or true chancre, and general symptoms. The first two are local, and the last a constitutional affection.

SECTION II. *Gonorrhœa and its Complications*.—1. The idea that gonorrhœa is dependent upon the syphilitic virus, and requires the use of mercurials, is without foundation. "To compel an unfortunate patient to undergo a course of mercury for a disease which does not require it, is a proceeding which reflects dishonor and disgrace upon the character of a surgeon."—(Sir Astley Cooper on the Use of Mercury in Gonorrhœa at Guy's Hospital.)

2. The treatment adapted for most cases of gonorrhœa consists of injections of a weak solution of some astringent, as from one to three grains of the sulphate, or acetate, of zinc to the ounce of water, repeated every four to six hours. Internally, a free purge at the outset, followed by laxatives, if necessary, to insure a daily evacuation from the bowels; alkaline mixtures, as solutions of the carbonates of soda or potassa, the acetate or chlorate of potassa, liquor potassæ, etc., and copaiva or cubebs.

3. When the symptoms are decidedly inflammatory, they should first be subdued by rest, cathartics, and low diet, before resorting to injections. Injections are also contra-indicated in cases complicated with prostatitis or cystitis.

4. Copaiva and cubebs should be given in somewhat full doses from the outset of their administration, but, at the same time, care should be taken not to carry them to the degree of intolerance. Excessive action upon the bowels should be restrained by opiates or astringents, in order that their active principle may be eliminated by the kidneys and pass off in the urine. They should be suspended if they occasion uncontrollable nausea or diarrhœa, a cutaneous eruption, severe pain in the kidneys, or general debility. Useful formulæ are the following: R.—Copaivæ, Spt. ætheris nitrici, āā., ʒj.; Liquoris potassæ, ʒij.; Spt. lavandulæ comp., ʒij.; Syrupi acaciæ, ʒvj. M. (Lafayette mixture.) *A table-spoonful three times a day.* R.—Pulveris cubebæ, ʒviiss.; Pulveris aluminis, ʒss. M. *This quantity to be taken daily in three doses.* Copaiva solidified by magnesia, (16 parts to 1 by weight,) and made into boluses, is a convenient mode of administration.

5. Medication, both external and internal, should be continued for ten days after all discharge has ceased.

6. The "abortive treatment" of gonorrhœa is adapted only to the commencement of the disease, before acute symptoms have set in. The best formula for its administration is a weak solution of nitrate of silver, (gr. j. ad aquæ ʒij.,) injected every two hours until the discharge becomes thin and watery, (which usually takes place within twenty-four hours,) and then omitted. Copaiva may be given simultaneously.

7. Chordee may be prevented by drachm doses of the tincture of camphor in water, taken at bedtime.

8. Commencing abscesses along the course of the urethra should be opened as soon as detected, even before fluctuation can be felt.

9. Acute prostatitis may be recognized by frequent and painful mic-

turition, a throbbing pain in the perineum, and more or less general febrile excitement; and the finger introduced *per anum* detects the enlarged and sensitive gland encroaching upon the rectum. Retention of urine frequently ensues, and requires the introduction of a catheter. When the instrument reaches the prostatic portion of the urethra, it excites great pain, and meets with an obstruction, due to the swollen gland, which is readily overcome by gentle and continued pressure, the handle of the catheter at the same time being depressed. This affection may terminate in resolution or in suppuration. The latter is announced by repeated chills; and, if the abscess points towards the rectum, fluctuation may be detected by the finger introduced *per anum*; more frequently, however, the matter tends to escape by the urethra.

10. Acute prostatitis is to be treated at its commencement by absolute rest, cups followed by poultices to the perineum, warm baths, and laxatives or enemata. The bladder should be evacuated, when necessary, with the catheter. If suppuration ensues, the abscess should be opened at an early period in whichever direction it tends to point, either with a knife through the rectum, or with the point of a catheter through the urethra.

11. Gonorrhœal cystitis is commonly limited to the neck of the bladder. Its symptoms are an urgent and frequent desire to empty the bladder; sharp pain attending the flow of the last drops of urine; the admixture of pus or blood with this fluid; tenderness of the hypogastric region; pain radiating to the groins, perineum, anus, and along the course of the urethra. There is usually less febrile excitement than in acute prostatitis.

12. Gonorrhœal cystitis is to be treated by rest, warm baths, cups, and poultices to the hypogastrium, and, internally, by saline laxatives, the carbonates of soda and potassa, the acetate or chlorate of potassa, liquor potassæ, mucilage, flaxseed tea, and copaiva.

13. Gonorrhœal epididymitis (swelled testicle) is best treated by the horizontal posture; support of the scrotal organs; an emetico-cathartic, as a solution of Epsom salts and tartarized antimony, given in sufficient doses to act freely upon the bowels and maintain slight nausea; the application of leeches or cups just below the external abdominal ring, or bleeding from the scrotal veins, (the patient in a standing posture, and the scrotum compressed at its neck either with the hand or a fillet, and bathed with hot water until its veins are well distended;) and hot poultices, either of flaxseed or tobacco-leaves, to the affected part. Evacuate any collection of fluid in the tunica vaginalis; and, even in the absence of any marked degree of hydrocele, Velpeau's treatment by means of multiple punctures with a lancet is worthy of a trial. When the acute symptoms have subsided, employ a more tonic regimen, and strap the affected testicle. Mild urethral injections are not contra-indicated by the occurrence of swelled testicle.

14. Gonorrhœal ophthalmia requires the strictest attention to cleanliness, the frequent use of an astringent collyrium, freedom of the bowels, and, in most cases, tonics or stimulants. The eyes should be bathed every fifteen minutes with a solution of a drachm of alum to a pint

of tepid water, or a decoction of poppy-heads. The surgeon at his daily visit, after thoroughly cleansing the mucous membrane of its purulent secretion and the adherent masses of coagulum, should snip the chemosed portions of the ocular conjunctiva with scissors, and, after the bleeding has ceased, pencil the whole affected surface either with the solid crayon of nitrate of silver, or with a strong solution of the same salt, (℞j.—℥j. ad aquæ ℥j.,) washing off the residue with tepid water as soon as the surface has become whitened. In addition, a solution of five grains of nitrate of silver to the ounce of water may be dropped in the eye three or four times a day by the attendant. An active purge at the outset of treatment is desirable, and a daily evacuation of the bowels should be secured.

The great danger to vision is from ulceration and slough of the cornea, a tissue of low vitality, and a disastrous termination of the disease is favored by a low condition of the general system; hence all depressing agents, as venesection, mercurials, tartarized antimony, abstinence from food, etc., are to be avoided, and a nourishing diet, porter, ale, quinine, and other tonics, to be enjoined. If ulceration of the cornea occurs, its progress may perhaps be arrested by lightly touching the surface with a pointed crayon of nitrate of silver; and the pupil should be kept constantly dilated with atropine or belladonna. Poultices of every kind are to be strictly prohibited, and the eye left uncovered. The discharge is highly contagious, and the utmost caution should be used to prevent its coming in contact with a sound eye.

SECTION III. *The Simple Chancre and its attendant Bubo*.—1. The simple chancre, for many years confounded with true syphilis, is now known to be an entirely distinct affection, local in its character, and not requiring the use of mercury in its treatment. We are indebted for the demonstration of this fact to Bassereau, who, by an extensive comparison of individuals bearing venereal ulcers with the persons who infected them, has shown that when the disease remains local in the former, it was likewise so in the latter; and, on the other hand, that if it affects the general system in the one, it has done the same in the other; and this result has been confirmed by Ricord, Fournier, Clerc, Caby, Dron, Rollet, and Diday, of France, by Mr. Henry Thompson, Mr. Henry Lee, and Victor de Meric, of London, and numerous other observers. Independently of clinical experience, therefore, the distinct nature of the simple chancre and of true syphilis rests upon the same proof that is relied upon by naturalists in the determination of species in the animal and vegetable kingdoms, viz.: upon the immutability of their characteristic features in successive generations. But, above all, the recognition of this truth is sustained by clinical experience, which shows that a wide disparity exists between one class of cases in which, even without the administration of mercury, the disease disappears forever with the healing of the ulcer, and another class in which, without mercurials, general symptoms are sure to make their appearance, and, under the best directed treatment, relapses may occur at any period of the remaining life of the individual. Moreover, the explanation formerly given of this disparity, that it was due to a difference of idiosyncrasies, is found not to bear the test of examination; and we

are forced to the conclusion that the term syphilis, as used until a very recent date, embraces two distinct affections. To the one which is local in its character, the name of simple, soft, or non-infecting chancre, or chancroid, is now given; the term syphilis being retained exclusively for the constitutional disease.

2. The diagnostic characters of the simple chancre and the infecting chancre (the initial lesion of true syphilis) are the following:

#### SIMPLE CHANCRE.

*Origin.*—Always derived from a simple chancre, or virulent bubo. Its first appearance generally within a week after contagion.

*Anatomical Characters.*—Generally multiple, either from the first or by successive inoculation.

An excavated ulcer, perforating the whole thickness of the skin or mucous membrane.

Edges abrupt and well defined, as if cut with a punch, not adhering closely to subjacent tissues.

Surface flat, but uneven, "worm-eaten," wholly covered with grayish secretion.

No induration of base unless caused by caustic or other irritant, or by simple inflammation; in which case the engorgement is not circumscribed, shades off into surrounding tissues, and is of temporary duration.

*Pathological Tendencies.*—Secretion copious and purulent, inoculable.

Slow in healing. Often spreads and takes on phagedenic action.

May affect the same person an indefinite number of times.

*Characteristic Gland Affection.*—Ganglionic reaction absent in a large proportion of cases. When present, one gland acutely inflamed, and generally suppurates. Pus often inoculable, producing a soft chancre.

*Prognosis.*—Always a local affection, and cannot infect the system. "Specific" treatment by mercury and iodine always useless, and, in most cases, injurious.

#### INFECTING CHANCRE.

*Origin.*—Always derived from an infecting chancre or secondary lesion. Its first appearance often from one to five weeks after contagion.

*Anatomical Characters.*—Generally single; multiple, if at all, from the first; rarely, if ever, by successive inoculation.

Frequently a superficial erosion; not involving the whole thickness of the skin or mucous membrane, of a red color, and nearly on a level with the surrounding surface. Sometimes an ulcer, when its

Edges are sloping, hard, often elevated, and adhere closely to subjacent tissues.

Surface hollowed or scooped out, smooth, sometimes grayish at centre.

Induration firm, cartilaginous, circumscribed, movable upon tissues beneath. Sometimes resembles a layer of parchment lining the sore. Generally persistent for a long period.

*Pathological Tendencies.*—Secretion scanty, chiefly serous; inoculable with great difficulty, if at all, upon the patient or upon any person under the syphilitic diathesis.

Less indolent than the chancroid. Phagedena rarely supervenes, and is generally limited.

One attack affords complete or partial protection against a second.

*Characteristic Gland Affection.*—All the superficial inguinal ganglia, on one or both sides, enlarged and indurated; distinct from each other, freely movable; painless, and rarely suppurate. Pus never inoculable.

*Prognosis.*—A constitutional affection. Secondary symptoms, unless prevented or retarded by treatment, declare themselves in about six weeks from the appearance of the sore, and very rarely delay longer than three months.\*

\* The Pathology and Treatment of Venereal Diseases: including the Results of Recent Investigations upon the Subject. By F. J. Bumstead, M.D. 1861. P. 394.



3. When in doubt as to the nature of a venereal ulcer, treat it as a soft chancre, and keep the patient under observation until the period of incubation of general symptoms has passed. This rule is justified by the following considerations:

a. Statistics show that there are four simple to one infecting chancre; hence, in a given case, the probabilities are in favor of the sore being of the former species.

b. Even if the sore should chance to be an infecting chancre, the administration of mercury will not prevent contamination of the general system, which has already taken place. Moreover, nothing is lost by delay, since syphilis is equally amenable to treatment after the appearance of secondary as after primary symptoms.

c. We are not justified in subjecting a patient to a mercurial course unless the necessity of it is apparent.

d. An immediate resort to mercurials leaves the case in doubt, since there are no means of determining whether the subsequent immunity is due to the treatment or to the nature of the sore; and as it is not a matter of indifference whether a man has or has not in his system the germ of constitutional syphilis, no measures should be adopted which will leave the question undecided.

4. Cicatrization of a soft chancre may take place spontaneously, and is not hastened by the use of mercury. The most effective treatment consists in the destruction of the local sore by means of a powerful caustic; and the earlier this is applied the better the chances of success. For this reason, and also for the purpose of preventing the communication of the disease to others, venereal ulcers should be destroyed at the earliest possible period, even before their nature has been determined.

5. For the destruction of simple chancres, nitrate of silver, as commonly employed, is unreliable, and, in most cases, inadequate. Fuming nitric acid is the most convenient agent, and if the fall of the eschar fails to leave a healthy surface, the application should be repeated.

6. Cleanliness is of the first importance, and that dressing is commonly the best which accomplishes this in the most perfect manner. Any collection of the secretion upon the surface of the sore or upon neighboring parts, and the formation of scabs, should be avoided. Lotions are preferable to ointments, and may consist of simple water, a solution of tannic acid, (gr. iij. ad ʒj.) a drachm of Labarraque's solution of chlorinated soda to two ounces of water, or a drachm of dilute nitric acid to eight ounces of water; and the dressing should be kept moist by being covered with oiled silk. Chancres beneath the prepuce will heal much more speedily, if the glans be uncovered and the sore dressed with wet lint covered with oiled silk and a circular bandage around the penis.

7. Phagedenic ulceration is far more likely to attack a simple than an infecting chancre, and is favored by a low state of the general system, however induced, and by a scrofulous diathesis. It is to be treated by placing the patient in the most favorable hygienic condition, by a nourishing diet, tonics, as the various preparations of iron



in large doses, opium, and the free cauterization of the ulcer with nitric acid, Vienna paste, or the actual cautery. A solution of the potassio-tartrate of iron (℥ij. ad aquæ ℥ij.) is a valuable local application. The internal use of mercury is highly injurious.

8. A simple chancre may or may not react upon the neighboring lymphatic glands. In the former case it gives rise to an inflammatory bubo, which may be either simple (containing simple pus) or virulent, (containing pus capable of inoculation.) The two varieties cannot readily be distinguished except by artificial inoculation, nor is their diagnosis of much practical importance. The former may sometimes be aborted by rest, the application of tincture of iodine or a strong solution of nitrate of silver, (℥ij. ad aquæ ℥j.) or by pressure by means of compressed sponge and a spica bandage. The latter always terminates in suppuration.

9. As soon as fluctuation can be detected, the abscess should be opened, either by several small punctures, followed by an injection of the cavity with a solution of sulphate of zinc, (gr. iij. ad aquæ ℥j.) or one part of tincture of iodine to four of water, and pressure, by means of a compress and spica bandage, be employed to insure adhesion of the walls; or the abscess should be freely opened by a vertical incision, (not parallel to the inguinal fold,) and the cavity, stuffed with lint, be left to heal by granulation.

10. Suppuration in a bubo affords a probability, although not an absolute certainty, that the accompanying chancre is of the simple, non-infecting species; since it is a general but not invariable rule, that syphilis does not follow an open bubo.

SECTION IV. *Syphilis*.—1. The term "syphilis" is here used to the exclusion of the local affection just referred to. The symptoms of this disease are commonly divided into primary (including the initiatory chancre and accompanying induration of the glands) and general, (including the so-called secondary and tertiary manifestations.)

2. A true chancre is the initiatory lesion of acquired syphilis, appearing at the point where the virus entered the system, and separated from the general manifestations of the disease by a period of incubation pertaining to the latter. Analogy would show that a chancre, like the vaccine vesicle, is already the result of absorption of the virus and of infection of the constitution, and not a mere local disease; hence, that its abortive treatment by destructive cauterization is incapable of averting general syphilis; hence, also, that it should receive the same general treatment as the later manifestations of the diathesis. Clinical experience confirms this view, since thorough destruction of a chancre six hours after its first appearance has failed to avert general symptoms. The period of incubation possessed by the true chancre, and the fact that it is not inoculable upon the patient, point to the same conclusion.

Experience also proves that the cicatrization of a chancre, unlike that of a chancreoid, is hastened by the internal use of mercury. This sore, therefore, demands the same internal treatment as general syphilis.

3. The same form of local dressing may be used for the true chancre as for the chancreoid.

4. Induration of the neighboring lymphatic glands (indurated bubo) is one of the most valuable indications of an infecting chancre, and is always present, except, perhaps, in very rare instances. This bubo is commonly free from inflammatory action, and hence may pass unnoticed by the patient. It demands no special treatment, except in those unusual cases in which inflammation and suppuration take place, when the same treatment should be adopted as that already recommended for inflammatory buboes. The persistency of the induration for a long time after the primary sore has healed is of great value in indicating the seat of the sore, and in unraveling the history of obscure cases.

5. There is always an interval between the appearance of the chancre and of the general manifestations of syphilis. This period of incubation of general symptoms, so called, is fixed within certain bounds, like the incubation of other infectious diseases. Its average duration is six weeks; it rarely exceeds three, and never six months; its shortest duration is about three weeks. A venereal ulcer will, therefore, be followed by general symptoms, if at all, probably within three, and certainly within six months. It is to be understood that this rule applies only to cases in which the natural course of the disease has not been interfered with by specific treatment. The administration of mercury for the primary sore may retard, or altogether prevent, the appearance of general symptoms.

6. Early general symptoms, especially in the absence of treatment of the preceding chancre, are very uniform in their character, and commonly consist of an eruption of blotches or papulæ upon the skin, pustules upon the scalp, swelling of the glands of the nucha, opaline patches (mucous patches) upon the mucous membrane of the mouth and fauces, condylomata about the anus, and alopecia, attended often by general malaise, headache, and fleeting pains in various parts of the body, (more particularly in the neighborhood of the joints,) which are most severe at night. These symptoms are especially worthy of remembrance, since they are often of so slight a character as not to fix the attention of the patient himself, and they should be carefully watched for after the occurrence of any venereal ulcer, the diagnosis of which was uncertain.

7. The secretion of secondary symptoms cannot, as a general rule, be inoculated upon the patient or upon any person under the syphilitic diathesis, but is contagious to individuals free from such taint. This rule is equally true of the secretion of the primary sore or chancre, and is the same that obtains in other infectious diseases, as small-pox, vaccinia, &c. Syphilis contracted from a secondary lesion pursues the same course as when contracted from a primary lesion, commencing in both cases with a chancre.

8. The remedies required for the treatment of syphilis are, for the most part, included under the head of mercurials, the compounds of iodine, and tonics.

9. Mercurials exercise their greatest power over the primary sore, and over early or so-called secondary symptoms. The action of the iodides is limited almost exclusively to the late or tertiary lesions. It is a mistake, however, to suppose that the compounds of iodine are alone sufficient for the permanent cure of even tertiary lesions, which are very prone to relapse, unless mercury has also entered into the treatment. The iodides are, therefore, to be regarded as temporary substitutes for, or as the adjuvants of, mercurials in the treatment of syphilis. They are of special value in syphilitic affections of the bones and periosteum; also in broken-down constitutions, when mercurials are inadmissible until a better condition of the system has been secured.

10. The value of tonics in the treatment of syphilis cannot be overrated. Chemical analysis of the blood of syphilitic subjects shows an excess of albumen and a diminution of corpuscles; in short, a condition of chloro-anæmia obtains. The teachings of clinical experience are still more decisive. Nothing so obstructs the successful treatment of syphilis, and nothing so conduces to a relapse after an apparent cure, as a low condition of the general system. Hence the surgeon should aim to build up, and not to pull down; and this is to be accomplished by placing the patient under the most favorable hygienic influences, and by the use of tonics, as iron and quinine.

11. No one form of mercurial is adapted to all cases. The following formulæ are given as examples of those most frequently applicable:

R.—Pil. Hydrargyri, ʒj. Ferri Sulph. Exsicc., ʒss. Divide into 30 pills. One three times a day.

R.—Hydrarg. Bichloridi, gr. ij. Tinct. Gentian. Comp., ʒiv. M. A tea-spoonful.

R.—Hydrarg. Protiodidi, gr. x. In 20 pills. One after each meal.

R.—Hydrarg. cum cretâ, ʒj. Quinæ Sulphatis, ʒss. M. In 30 pills. One three times a day.

R.—Hydrarg. Bichloridi, gr. ij. Potass. Iodidi, ʒij. Tr. Gentian. Co., ʒij. Aquæ, ʒij. M. A tea-spoonful.

R.—Hydrarg. Bichloridi, Ammoniac Muriatis, āā, gr. ij.; dissolve in a sufficient quantity of water, and add powdered cracker, q. s. Syrupi Acaciæ, q. s. M. In 36 pills.

12. The action of mercury upon the bowels should, if necessary, be restrained by the addition of opium or astringents; and, in some instances, the internal use of the remedy must be suspended and inunction employed.

13. Salivation is to be regarded as prejudicial to the success of treatment, and should be carefully avoided; although it is often justifiable, and even desirable, to excite slight tenderness of the gums, in order to be sure that the full effect of the remedy has been obtained. Salivation is most successfully treated by omitting the mercurial, securing freedom of the bowels, astringent gargles, and the internal administration of the chlorate of potassa, (ʒj.—ij. per diem in solution.)

14. Mercurial cachexia is rarely induced when the remedy is judiciously employed, especially if combined with hygienic treatment and the use of tonics. If, however, in any case, after improvement con-

tinued for a time, the appetite begins to flag, and the patient complains of malaise and mental depression, the administration of mercurials should be suspended, and afterwards resumed, if necessary to complete the cure.

15. The mode of using mercury which is the least likely to produce any of the above unpleasant symptoms is by inunction; and in very many cases this method will be found superior to all others. Its advantages are, that it rarely salivates; that it leaves the intestinal canal undisturbed, and does not impair the appetite; and hence that it may be used in cases of general debility and of extreme susceptibility to the morbid action of the mineral, when it is of the first importance to sustain the vital powers by a nourishing diet and the administration of tonics, without interference. About a drachm of the ointment should be rubbed into the axillæ and upon the inner surfaces of the thighs alternately every night, and the residue removed with warm water and soap the following morning.

16. The treatment of syphilis should invariably be conducted in a hospital. The dangers to be apprehended from exposure and hardship while pursuing a mercurial course are too great to admit of this treatment being undertaken in camp.

17. Little need be said with regard to the use of iodide of potassium, except that this salt should enter largely into the treatment of the later forms of syphilis, as syphilitic tubercles, gummy tumors, deep ulcerations of the fauces and larynx, and the affections of the bones and periosteum; but although, in some cases, it may constitute the only remedy specially directed against the diathesis, which is admissible for a time, yet in all, mercurials should be sooner or later employed.

18. Treatment should be continued until all syphilitic symptoms have disappeared, graduating its severity according to the effect produced and the general condition of the patient; and even after the last manifestation of the diathesis has passed away, experience teaches that treatment must be still further prolonged if the patient would secure immunity for the future.

19. The limits of this essay do not permit of reference to the special treatment adapted to the various syphilitic lesions. It is desirable, however, to call attention to the importance in syphilitic iritis of keeping the pupil constantly dilated by means of a solution of belladonna, (one scruple of the extract to an ounce of water, strained,) dropped into the eye every few hours. Moreover, in the treatment of this affection, a combination of tonics with mild mercurials (as, for instance, quinine with the gray powder,) will yield far more satisfactory results than the latter alone.

## REVIEWS AND BIBLIOGRAPHY.

*A Practical Treatise on Fever, or Selections from a Course of Lectures on Fever.* Being part of a Course of Theory and Practice of Medicine; delivered by ROBERT D. LYONS, K.C.C., Professor of Practice of Medicine and Pathology in the School of Medicine of the Catholic University of Ireland; late Pathologist-in-Chief to the British Army in the Crimea, &c., &c., &c. Philadelphia: Blanchard & Lea. 1861. Octavo, pp. 362.

This is a reprint of a valuable work by a Dublin professor, which our American publishers have done well to bring before the American public. To show up briefly the subject-matter, we will transcribe the Table of Contents as follows: Chap. 1, General Observations; Chap. 2, General Pathology of Fever; Chap. 3, Classification of Fevers; Chap. 4, Simple Continued Fevers; Chap. 5, Varieties of Synovial Fever; Chap. 6, Typhus Fevers; Chap. 7, Typhoid Fevers; Chap. 8, Typhoid Fever of Crimea; Chap. 9, Yellow Fever; Chap. 10, Pathological Anatomy of Yellow Fever; Chap. 11, Yellow Fever of Lisbon.

This work exhibits two facts of prime importance in giving value to its contents; which are, first, that the author has read up to the knowledge of the day; and second, that he has himself a large experience upon the subjects treated of in his lectures. The subject of fever is not yet exhausted, nor is it likely to be, and every clever work upon it, perhaps to the end of time, will be a valuable addition to medical literature. This is a clever work, from which practitioners and students may derive much profitable instruction. We cannot promise them that they will discover in its pages precisely and unequivocally what fever is in its essence, but they will learn what the best pathologists and therapeutists have to say upon the subject.

"Galen," our author tells us, "asserted that the *essence* of a fever consisted in a *calor præter naturam*, or an increase of the animal temperature of the system to a degree greater than that of the physiological standard." The most advanced researches of modern inquirers can add nothing, he says, to this doctrine. The word fever, from *fervere*, to glow, is expressive of increased temperature. *Pyrexia* conveys the same meaning. "Now, the researches of modern chemistry," he proceeds, "seem to show that these names are in reality less metaphorical than they would at first sight appear to be. While, furthermore, it is proved that the animal temperature, whether in the physiological state of matter, or in the pathological state of dis-

ease, is maintained by a true process of combustion, in no essential respect differing from that which takes place in any ordinary fire, or other agency consuming oxygen and generating artificial heat."

We quote the above passage to let the author speak for himself, not to endorse it, for, in fact, we have no faith in the combustion theory. In our opinion, with many others equally luminous and dazzling, it is fairly *burnt out*.

What is fever? "It is not inflammation," says our author, in which he is undoubtedly right. We want a positive answer. Well, then, "Virchow seems to be fully justified in the statement that it is no longer doubtful that in the *calor præter naturam*, as stated by Galen, is the *substance of fevers*." Perhaps so, but we think in the following paragraph, Virchow's views more nearly coincide with the state of our knowledge.

"If, then, with Virchow, we regard *increased heat as the pathognomonic symptom* and the *essential condition of fever*, (Italics ours—REVIEWER,) and consider it to be dependent on increased metamorphosis and increased consumption of the constituents of the body, we have yet to seek the cause of the increased action in the system. This cause, the *causa proxima* of fever, Virchow regards as internal, and connected with the body itself, in contradistinction to the external cause acting on the body from without. Various changes in the constitution of the blood, productive of a *materies acris*, feverstuff, *pyretogen* of Eisenmann, have been assumed as the causes of fever; but while we hold that in many cases some such change is actually produced, we are not yet in a condition either to determine its precise nature, or to understand how it is itself brought about."

The author thinks we must look to the nervous system for the first indications of change, before any part of the circulating apparatus is involved. Speaking of the "state of the nerves in fever," he again calls in the support of the German pathologist.

"Fever, thus, in the opinion of Virchow, essentially consists in an increase of temperature, which is caused by an increased consumption of organic material in the system, and appears to have its origin in certain changes in the nervous system. These changes may be considered to affect primarily the regulator or moderator functions of the nerves, and to be of a paralytic nature. It is probable that the *vagi* nerves, and, we would add, the sympathetic, are primarily, if not chiefly, engaged in the production of the febrile phenomena."

Leaving the matter of the essence of fever, we will pass on to considerations of a more intelligible, if not of a more interesting charac-



ter. We do not propose to trouble the reader with long quotations from Dr. Lyons' work, but the following paragraph is so expressive of sound views, that we are sure it will find acceptance.

"While I believe it can be said with truth that we can *cure* many inflammations by the intervention of our art, the same cannot be affirmed of fevers. In fevers, the highest efforts of our art, the most delicate care, the most refined skill, the most sure appreciation and adaptation of means to ends which we can command, must all be directed to watching, supporting, maintaining, and, it may be, stimulating the system till the fever-storm shall have passed over it. In fever cases, your duties as practical physicians will be like those of the sailor whose ship is riding out the gale. With firm hand and ready eye, he is prepared for every emergency that can arise; but he neither puts on sail nor close-hauls his ship till the actual moment of danger arises. It must be the same with the physician in the management of fever cases; he must act on the *defensive*, and not on the *offensive*. Press your ship too much, and she founders; meddle but never so little too much with the fever, and your patient dies."

We consider the above a very good summary of the principles of treatment to be observed in continued fevers. In other words, they are best treated by expectation.

Our author, in the course of his work, gives very full descriptions of the various forms of fever, as indicated in the table of contents; and he is profuse in details of morbid anatomy from his own dissections. Sometimes, indeed, he exceeds what is useful or necessary, especially in making records of post-mortem examinations, where no previous history of the case is given.

His treatment of disease is generally eminently judicious.

We cannot always commend his style, for it is now too rhetorical, and again unpardonably careless; in some cases we find errors of omission; as, for instance, where he recommends from half a drachm to two drachms of carbonate of ammonia in a decoction of polygalaseneke, as a valuable remedy in typhoid bronchitis. He does not tell us whether this is to be taken in one, or twenty doses. He may leave this to the discretion of the reader; but if so, why specify any quantity?

His statements are often wanting in method and precision, and now and then he offers opinions which are superfluous in themselves, and which rest upon very slight foundations. Thus, he has formed a "notion" ("but I in no way insist upon it as a well-grounded hypothesis;" he says,) that sthenic types of fever prevail most among



the graminivorous and herbivorous races of men, "while the putrid or typhous types of febrile action more readily develop themselves in the races amongst which animal food constitutes a large part of their ordinary aliment."

This is indeed a singular notion for an Irish physician. He uses, elsewhere, typhus fever and Irish fever as synonyms. Now, large numbers of the humbler classes of his countrymen rarely eat meat, yet they are exceedingly obnoxious to this form of fever; while in this country, where those of them who come among us, as well as our entire native population, eat meat without stint, typhus fever is almost unknown. But he gives, himself, the best refutation of his notion when he says, in the *great famine fever visitations of Ireland* in 1846, 1847, and 1848, *maculated typhus was the disease which principally prevailed*. He asserts this upon his own "large and extended experience."

We do not make these critical remarks in any spirit of fault-finding, but simply because we think so skillful a physician, and so clever a writer as Prof. Lyons, should take more pains to do himself justice.

In a supplementary chapter relating to the appearance of yellow fever at Lisbon, in 1857, the author brings sufficient proof to show that the disease originated there, and that it was not brought from abroad. He tells us, *inter alia*, "that all parts of the city attacked by the epidemic presented in common certain conditions of insalubrity, which may be classed as follows: A. Defective water supply. B. Total absence or incompleteness of house-drains, privies, and a consequent uncleanly state of the streets. D. Badly-constructed dwellings, with deficiency of light and air, and want of thorough ventilation. E. Absence or defective condition of tertiary and secondary sewers," &c.

These are but a few of the local conditions which gave origin and fatality to that epidemic.

We do not know if there are now any believers in the contagiousness of yellow fever. Our author tells us of the unrestrained intercourse between the City of Lisbon and the neighboring places during the prevalence of the epidemic, without any communication whatever of the disease.

The experience of our physicians in Baltimore bears the same testimony. We saw in this city, in September, 1855, as formidable and as fatal cases of yellow fever as we had ever seen or heard of in hot climates, brought here from Norfolk, which was then ravaged by the disease. There was no propagation of it whatever. Previously, in July, 1847, it was our fortune to spend some weeks in camp at Vergara, on the sea-beach, three miles from Vera Cruz, with about twenty-

six hundred troops of all arms, bound for the interior. The fever was raging in the city while in camp; notwithstanding the continuous communication, not one single case occurred. While the surgeons within the walls of the town were battling with the yellow fever, we, in the camp, had little else to contend with than diarrhœa and dysentery, which, indeed, gave us abundant occupation.

In taking leave of Dr. Lyons' work, we can assure the reader that it is one well worthy of study, notwithstanding certain defects, to which we have made sufficient reference.

R. M's.

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*Nouveau Formulaire Magistral, précédé d'une notice sur les Hôpitaux de Paris, de généralités sur l'Art de formuler, suivi d'un précis sur les eaux minérales naturelles et artificielles, d'un mémorial thérapeutique de notions sur l'emploi des contre-poisons et sur les secours à donner aux empoisonnés et aux asphyxiés.* Par A. BOUCHARDAT, Professeur d'Hygiène, etc. Dixième Edition. Paris: Baillière. 1861. 16mo, pp. 589.

New Medical Formulary, with an Introduction containing a notice of the Paris Hospitals, of the Preparation of Prescriptions, &c., &c. By Prof. A. BOUCHARDAT.

This valuable formulary of Bouchardat, although but little known in this country, has been before the public since 1839. The tenth edition is revised and improved, containing, among other things, some of the formulæ used in the preparation of certain quack compounds, whose virtues have been much lauded by their manufacturers. The book is a model of conciseness and accuracy—a true *multum in parvo*. It would be impossible within the space allotted us to give more than a general idea of its contents.

The author properly considers a magistral formulary as the complement to treatises on *Materia Medica* and *Pharmacy*. It brings into practical employment all the knowledge contained in the latter—exhibiting the combinations of remedies or *recipes* which are habitually kept on hand in the shop—that is, those which are *officinal*, and also such as have been recommended by eminent practitioners as especially serviceable to meet certain morbid conditions. Bouchardat's book furnishes us this kind of information from a field not always convenient to the English practitioner, being rich in gleanings from the French hospitals and private practice. He classifies his formulæ according to their therapeutic value, so that the reader may have the opportunity of comparing different formulæ for the purpose of selecting those which

are best suited to the wants of the particular case under treatment. The general properties of the different classes of therapeutic agents are also given, and their *modus operandi* on the animal system. The book is, on this account, of equal value to the practitioner and the pharmacist.

Every one has seen the advertisements of an English quack remedy known as *Holloway's Pills*—which set forth the most marvelous virtues of the same, almost inducing the belief that they may be specific in all the diseases to which poor mortality is heir. It is amusing, however, to find that this cathartic remedy is, after all, nothing but a compound of aloes and rhubarb, with some rather unimportant additions, and, on the whole, much inferior to the Pil. Cath. Comp. of our Pharmacopœia. The formula is as follows: R.—Aloes, grs. lxii.; Pulv. rhei, grs. xxvi.; Piperis, grs. viii.; Croci, grs. iij.; Sodæ sulphat., grs. iij. Fiat massa, in pilulas cxliv. dividenda. Preparations of coal tar, the disinfectant which became so popular in France about a year since, glyceroles and propylamin, are introduced in this edition for the first time.

The general directions for the treatment of cases of poisoning and of asphyxia from drowning are of great practical value for the profession. We should like to see an American edition of the book, somewhat modified, to suit our own wants; but it is hoping against all reasonable expectation, and we must therefore suggest to our readers who are at all acquainted with French, to add this little pocket volume to the books already on their shelves. Bouchardat publishes an Annual, containing the yearly contributions to therapeutics and toxicology, as well as new formulæ, with the title of *Annuaire de Thérapeutique*, which also demands careful examination at the hands of the busy practitioner who has but little time to examine journals.

L. H. S.

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*Wheat, its Worth and Waste, with Original Microscopic Illustrations.*

By WM. HAND BROWNE and THOS. J. HAND. New York: Printed for Hand, Thomas & Co., by Torrey Brothers, 13 Spruce Street. 1862.

*The Theory and Art of Bread-Making. A New Process, without the Use of Ferment.* By E. N. HORSFORD, Rumford Professor in Harvard University, Cambridge. Cambridge: Welsh, Bigelow & Co., Printers for the University. 1861.

The duties of the physician, and the responsibilities of Medical Science, do not end with giving pills, or treating disease. Hygiene, as

well as Therapeutics, claims their attention, and in latter days has received a fair share of it. No other body of men, certainly, have devoted themselves so untiringly to the great questions of sanitary reform, although such movements are directly opposed to their pecuniary interests. Prominent among these questions is that of the Hygiene of Food. It is one which has not comparatively received that degree of consideration which it deserves at the hands of the profession. There is certainly none more intimately connected with the physical well-being of the entire race.

The publication by the *London Lancet* of the investigations of the Commission on Adulterations in that city evidences the interest which is felt in the subject by our medical brethren on the other side the Atlantic, while the researches of Dr. Hassall in the same field have entitled him to our lasting gratitude. But if there is one article of all others on the perfecting of which the physical well-being of the human race depends, it is that to which the least degree of scientific attention has been given, viz., the art of preparing the staple, *Wheat*, to be eaten.

The grinding of flour and its conversion into bread have been known so immemorially, and considered so simple, that Science has not troubled herself to inquire whether the methods for effecting these objects were not susceptible of improvement. What has been done in this line has been attempted generally by unscientific men, and has consequently fallen to the ground.

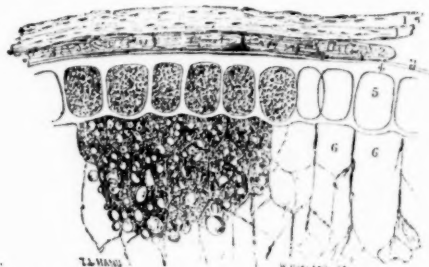
Two little treatises have been recently placed in our hands, both having in view the same object—the introduction into our bread of more *gluten* and a greater proportion of the *phosphates*, both very important constituents of animal nutriment. The means, however, which they propose to accomplish this end are very different. The one entitled “Wheat, its Worth and Waste,” by Wm. Hand Browne and Thos. J. Hand, simply aims to preserve these elements which God has stored away for our use, most abundantly in this cereal, and which we most blindly throw away. The other, called the “Theory and Art of Bread-Making,” is from a no less well-known *savant* than Prof. Horsford, of Cambridge. Its aim is to do away with the use of ferment, substituting in its place a chemical agent which, while by the generation of carbonic acid, it produces all the useful effects of yeast, at the same time saves a portion of the gluten from destruction by the fermentative process, and adds the phosphatic element.

The first plan must meet the unqualified approval of every one who will take the trouble to inquire into its principles. All writers

coincide in attributing the superiority of wheat over other grains as a nutrient to the greater amount of gluten which it contains. Chemists and physiologists alike declare gluten to be "easy of digestion"—"highly nutritious"—"itself satisfying complete and prolonged nutrition." Nor does its importance end here—it is essential to the making of a light loaf. Messrs. Hand and Browne tell us that "the part which the gluten plays in this process is three-fold: it absorbs the water, retains the gas, and expands in baking. So peculiar to the gluten is this power of absorbing water, that a 'strong' flour (or one rich in gluten) may be known by the quantity of water it takes up in the mixing: in other words, a flour will absorb water just in proportion to the gluten it contains. Hence the value of a strong flour to the baker, as by its absorption of water it yields a greater weight of bread, or can be used to enrich a poor, starchy flour; while the consumer, although in purchasing such bread he buys more water to the pound, actually loses nothing, but is a gainer by his bargain, as the richer the bread is in gluten, the more nutritious is it, and at the same time more palatable."

Now, microscopical investigation shows most conclusively, what has long since been imagined, that almost the whole of the gluten is contained in the outer coating of the kernel, while the interior is almost pure starch. Mr. Hand's microscopic illustrations of this subject are so novel, and so exquisitely drawn, that we avail ourselves of his permission to present some of them to our readers. The following cut shows the comparatively small space occupied by the innutritious husk, or true bran, with the rich layer of gluten-cells lying between it and the starch-cells which compose the mass of the grain.

FIG. 1.



Portion of Transverse Section of White Wheat, 150 Diameters.

- |  |                         |
|--|-------------------------|
| 1, 1, Double cellular coat, outer True Bran, } | BRAN OR HUSK<br>proper. |
| 2, Single cellular coat, inner True Bran, }    |                         |

- 3, Testa; a filmy cellulose membrane.
- 4, Inner cellulose membrane, covering gluten-cells.
- 5, Sack-like cells, containing GLUTEN, (some shown with gluten removed.)
- 6, Cells forming the central mass, containing STARCH, with some gluten, (contents of some cells removed.)

FIG. 2.

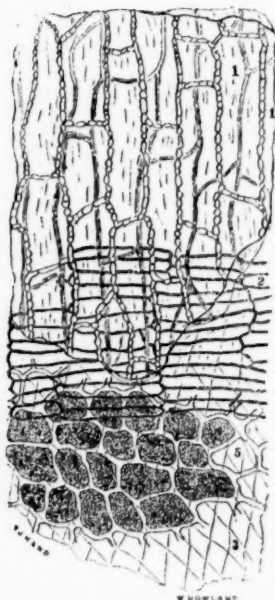


Fig. 2 exhibits the successive coats, freed from adhering starch-cells, under a magnifying power of 150 diameters, the outermost being nearest the observer's eye.

1, The outer true bran, (sarcocarp,) composed of a double layer of cells, elongated parallel with the axis of the grain.

2, Under this double coat is seen the inner true bran, (endocarp,) with its delicately beaded cells lying at right angles to those of the outer coat.

3, The testa is next perceived, overlying and extending beyond the group of gluten-cells.

5. This, the first layer of cells, consists of a series of separate sacks, compressed by crowding into irregular shapes, and averaging  $\frac{1}{675}$  of an inch in diameter in the specimens examined.

These sacks are filled with gluten, mingled with a small proportion of oily and albuminous matter; the gluten being in the form of minute granules, about  $\frac{1}{12000}$  of an inch in diameter. When the sacks are ruptured and the contents forced out, the particles of the latter adhere to each other with great tenacity.

Prof. Horsford gives the following chemical test for determining the comparative limits of the starch and the gluten:

"If a cross-section of wheat be exposed for a short time to the action of a solution of ammonio-sulphate of copper, the gluten will be impregnated with a green compound. The extent of the green compound, which is coincident with that of the gluten, will be found to be limited to a thin envelope immediately within the bran proper.

If another cross-section be exposed for an instant to the action of a solution of iodide of potassium, to which a few drops of nitric acid have been added, it will become deep violet wherever the starch granules occur, and the extent of the starch will be found to include the entire space within the thin envelope of gluten. Microscopic examination shows the gluten to be disposed in one continuous layer of cells, with no intervening starch granules, and the chemical tests show that the gluten-cells penetrate the starch but slightly, if at all."

But not only does this layer contain the greater part of the gluten; the phosphates also lie hidden in its pregnant cells. Says Prof. H. farther:

"A glance at these figures will explain why Mayer found fourteen times as much phosphoric acid in commercial bran as he found in commercial superfine flour. The bran carried with it most of the layer of gluten in which the phosphates and the companion nitrogenous compounds—the sources of living tissue—are lodged; while the superfine flour consisted chiefly of starch, but little of the gluten having been detached from the bran. Mège-Mouriès found the gluten coat to contain ten per cent. of nitrogen, while the average of the whole berry is from two to three per cent.

"A glance at these figures will also show why the bread made from Graham flour, and the Pampernickel of Westphalia, which is also made from unbolted meal, and the black bread of like origin found in the sacks of Russian soldiers in the Crimea, are so nutritious, in spite of their heaviness and sourness. They contain *all* the gluten as well as starch of the grain. All the phosphates and nitrogenous compounds of the grain enter into the bread when the bran is not separated from the flour, instead of a small fraction only, as in bread made from superfine flour."

Prof. Johnson discourses thus upon the same subject:

"It will not be denied that it is for a wise purpose that the Deity has so intimately associated in the grain the several substances which are necessary for the complete nutrition of animal bodies. The above considerations show how unwise we are in attempting to undo this natural collocation of materials. To please the eye and the palate, we sift out a less generally nutritious food, and, to make up for what we have removed, experience teaches us to have recourse to animal food of various descriptions. It is interesting to remark, even in apparently trivial things, how Nature is full of compensating processes. We give our servants household bread, while we live on the finest of



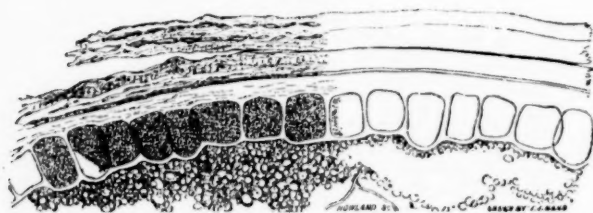
wheat ourselves. The mistress eats that which pleases the eye more; the maid, what sustains and nourishes the body better."

It is asserted by Mr. Hand that, in the present mode of grinding, the gluten is thus, almost all of it, thrown away in the bran. He says:

"Careful experiments have shown that the husk, or innutritious part of the wheat, is from about 2 to 5 per cent. of the weight of the whole grain; consequently, in 270 lbs. of wheat, the average quantity required to make a barrel of flour in the present mode of milling, there should be an average loss of about 10 lbs., every particle of the grain, except this husk, being convertible into flour. *At present, the ordinary weight of bran and offal to the barrel of flour is sixty to seventy pounds.* And of what does this needless loss consist—what element of the grain is thus wantonly thrown away? It is THE GLUTEN.

"We have seen, in the structure of the grain of wheat, that the principal mass of the gluten lies between the husk and the starch. Now, when the grain is crushed between the mill-stones, the layer of gluten sacks breaks up into fine scales, which adhere firmly to the husk, but readily detach themselves from the crumbling starch. Part of these scales, by the continuous attrition of the burrs, are torn from the husk and enter the bolting-cloth, which, from their irregular shape, they pass through with difficulty, and much more slowly than the round granules of starch; on which account, the 'head' and 'tail' of the bolting, as every miller knows, must be mixed together, to give a good flour.

FIG. 3.



Transverse Section of a Scale of Millers' Bran, magnified to 150 Diameters; drawn under the Camera Lucida, part being left in Outline only.

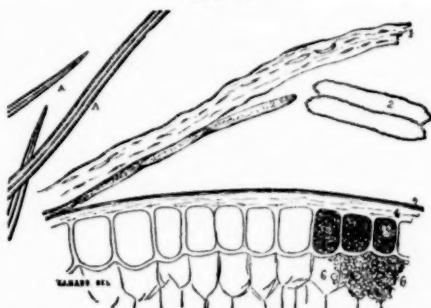
"But the larger proportion adhere to the husk, and with it are separated from the flour in the form of bran and offal, as may easily be seen by an examination of fresh wheat bran, where the inner surface will be perceived to be coated with a fine varnish of gluten, if, indeed, this is not concealed by a layer of adhering starch.

"The loss by this mode of grinding, the waste of this precious gift of Nature to the human race, is incalculable—literally incalculable. If it were merely a loss of *flour*, the figures would be startling—fifty or sixty pounds on every barrel of flour in the world are no trifling amount—but it is a loss of the *nutritious element* of flour; of the life-sustaining principle itself."

Finally, he claims, not to follow him through his entire discussion, that a process has been discovered by a citizen of the United States, by which the *true bran*, consisting, for the most part, of lignin, and therefore innutritious, irritative, liable to acetic decomposition, and often covered with smut, the larvæ of insects, must, etc., *can be peeled off from the surface of the gluten*, leaving the grain with a beautifully smooth and polished appearance, and quite free from dust, smut, or any other contamination.

The following drawing shows the effect of this process on the kernel:

FIG. 4.



Portion of Transverse Section of Unbranned Wheat, 150 Diameters.

[This specimen has been taken before the operation of unbranning was complete, in order to show at what point the separation takes place.

1, 2, True bran, not yet detached at one extremity—150 diameters.

2, Detached cells of inner true bran, presenting their sides—150 diameters.

A A, Portions of hairs from the *brush*—100 diameters.]

We feel constrained to express our entire assent to the proposition of the author, that "the saving of this immense quantity of Nature's most perfect food is a boon to the whole human family;" and consider that, in doing our small share towards making it more widely known, we have greater claims to gratitude than if we had announced the discovery of a dozen "new remedies."

Prof. Horsford takes the ground that the only object effected by the ferment, whether leaven or yeast, is the production of the mechanical expansive action by means of the carbonic acid evolved. But the process of fermentation is liable to the following objections:

1st. Partial liquefaction and destruction of the gluten.

2nd. The production of acids—*lactic*, *acetic*, etc.

3d. The presence of poisonous microscopic fungi.

4th. The impossibility, owing to these and other causes, of producing uniformly good bread.

The processes of Mège-Mouriès, (who employed extract of bran or groats as a source of ferment,) and of various experimenters who have attempted to introduce chemicals into the dough, which would produce the requisite amount of carbonic acid by their mutual reaction, are then detailed, together with the objections to them.

He then continues:

"In view of the foregoing, the question naturally suggests itself, May it not be possible to return a wanting ingredient, or add a nutritive constituent to the bread, at the same time that the raising of the loaf is accomplished as an incidental effect?

"This problem has been subjected to experimental solution.

"The idea which directed the research was the production, each by itself, of the two ingredients, the acid and the base of a normal salt, present in the cereals and all healthful food, and essential to the production of all the important organs of the body, in such form that the two mixed with flour would remain inert till the addition of water or the application of heat, and then unite to establish the normal salt, evolving incidentally carbonic acid from the midst of the dough, to make the bread porous.

"Of all the salts taking part in vital processes, the most important are the phosphates. They enter into the composition of the bones, the muscles, the nerves, the brain, and indeed of every higher tissue; and wherever an important function is to be performed, there nature has supplied a store of phosphates. They are present in all the forms of substantial food. Aside from the great prominence now given by the medical world to the use of the various forms of soluble hypophosphites, it is well known that finely prepared phosphate of lime, eaten as such, greatly aids the growth and firmness of bones and teeth. Fractured bones are reunited much more promptly upon a diet into which pulverized bone enters as a prominent constituent. The excess of phosphates in the secretions of the kidneys consequent upon extreme

mental exhaustion, has led to the use of some form of phosphorus to renew the cerebral and nervous fibre."

After dwelling upon the deficiency of the phosphates in ordinary flour, he suggests that, "to secure the more important of these in the bread, with the incidental evolution of carbonic acid, it is only necessary to mix together with the flour a dry, highly acid phosphate of lime, which is phosphoric acid and neutral phosphate of lime, and dry bicarbonate of soda, in such proportions as shall leave a neutral phosphate of lime, and phosphate of soda after the dough has been thoroughly kneaded and baked."

The objection to all such methods has generally been, the too great rapidity of evolution of the gas, causing it either to escape, or to collect in very large globules, not permeating the mass of the dough thoroughly, and hence leaving it heavy and indigestible; and the difficulty of mixing the chemical intimately with the flour. Whether this is overcome in the "*New Method*," must be a question of experience only. Prof. H. claims that the bread thus made is both lighter and more digestible, as well as more nutritious, in consequence of the acquisition of the phosphates. The idea is certainly a most ingenious application of chemistry to the wants of daily life, and deserves a fair consideration and trial.

1862

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*The Physician's Visiting List, Diary, and Book of Engagements, for 1862.* Philadelphia: Lindsay & Blakiston, 25 South Sixth Street, above Chestnut.

*The Physician's Hand-Book of Practice, for 1862.* By WILLIAM ELMER, M.D. New York: W. A. Townsend, Publisher, No. 39 Walker Street. 1862.

*The Physician's Pocket Memorandum, for 1862.* By C. H. CLEAVELAND, M.D. Cincinnati: Bradley & Webb, Printers. 1862.

*The Physicians', Surgeons', and General Practitioners' Visiting List, Diary, Almanac, and Book of Engagements for 1862,* upon a Plan furnished to the Publishers, by FRANCIS SEYMOUR HADEN, Esq. Sixteenth Year. London: John Smith & Co., Medical Publishers, 52 Long Acre.

*Agenda Médical, pour 1862.* Paris: P. Asselin, gendre et successeur de Labé, Libraire de la Faculté de Médecine, Place de l'Ecole-de-Médecine.

*Sächsischer Medicinal-Kalender für 1862.* Herausgegeben von RICHARD HAGEN. Leipzig: Verlag von Christian Ernst Kollmann. 1862.

Though rather later than usual, we do not fail to call the attention

of our readers to the year's Visiting Lists. We have watched their gradual rise as a class into professional favor with much interest, as evinced from year to year in our pages. We have gladly given them a helping hand and word of cheer, and now rejoice to find that they have become an "established institution," which the majority of physicians "would hardly know now how to get along without." On previous occasions we have spoken of them at length, both collectively and individually. We have given the readers of the MONTHLY our opinion repeatedly as to the merits and more or less grave objections appertaining to some of these publications, and have even on one occasion drawn the outlines of our ideal of a memorandum of this sort. If the times had not been so entirely out of joint as to forbid new commercial enterprises, we might perhaps have been inclined to materialize our ideas into an addition to their number. Not to repeat what we have already said of them, (for we do not find that any of them is, except as to date, essentially different from its appearance in previous years,) we would inquire of each reader if he uses a Visiting List, and if the answer of any one should be in the negative, to him we would say: Lose not another day, but obtain one at once; fill its blanks faithfully, and at the end of the year you will be a better and a wiser man!

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#### EDITORIAL AND MISCELLANEOUS.

THE SANITARY CONDITION OF THE ARMY appears to be, on the whole, satisfactory. All along the Potomac, reports reach us of the good condition and spirits of the troops. At Port Royal, there seems to have been a good deal of gastric or typhoid and malarious fever, and some suffering from the want of proper hospital accommodations. But considering the large body of troops there, and the fact that they are nearly all of them recent recruits, the number of unserviceables is not large.

Dr. Andrew, who accompanied the expedition, on the appointment of the Sanitary Commission, writes in his Report to Mr. Olmsted: "The singularity is not that there has been so much, but rather that there has been so little, of sickness in the army, and that in spite of all, its health is rapidly improving. The diseases which have been most frequent and fatal are of malarious origin. The fevers in some cases take on the intermittent type, but are more generally remittent. Very many cases of congestion have occurred, the attack being fre-

quently so grave that reaction cannot be established, and the patient dies in the first stage.

Thirty-eight of the 124 deaths which have occurred since the occupation of Hilton Head on the 7th of November—a list of which, to Jan. 6, was kindly furnished me by Dr. Cooper, Medical Director—are from this cause alone. After this, we have in the order of their mortality:

Typhoid fever .....	25
Diseases of lungs and air-passages .....	22
Variolous diseases and measles .....	10
Diseases of digestive organs .....	9
Gun-shot wounds .....	5
Remittent fever ..	4
Typhus fever .....	3
All others .....	8
Congestive fever .....	38
<b>Total .....</b>	<b>124</b>

A correct nomenclature of the diseases here reported would doubtless change the list, somewhat increasing the number of cases of typhus and remittent fever, at the expense of the typhoid. I saw one case of undoubted typhus which appeared on the hospital record as typhoid, and the Surgeon assured me that one had died bearing the same characteristic symptoms, and which I notice he has reported as typhoid fever. The same lack of discrimination which is observed in this locality between typhoid and remittent fever in its graver forms exists among the surgeons of the Expeditionary Corps."

From the West the accounts are not so encouraging. Carelessness, the absence of proper sanitary regulations, and in many cases, doubtless, of the means for enforcing them, together with exposure to the inclemency of the season, have not only placed many upon the sick list, but have run up a very large bill of mortality. The Sanitary Commission have an active worker there at present, in the person of Dr. Douglas, and we hope soon to hear of the results of his visit in an improved state of affairs and a cleaner bill of health.

The report of the Sanitary Commission, submitted to the Secretary of War, by the General Secretary, Mr. Frederick Law Olmsted, at the end of the year and of the first seven months of its service, is full of the most valuable information on this subject, and is, on the whole, of a very gratifying nature. It leads us to the conclusion that the Army of the Union is unquestionably more vigorous and enduring in

bodily powers to-day than at any former period; and that our forces may, by proper care, be kept in full and constantly increasing vigor. Among the evils which it points out, are: Carelessness, or entire neglect in inspection of recruits. We quote:

"In fifty-eight per cent. of the regiments, there had been no pretence of a thorough inspection of recruits on enlistment. In only nine per cent. had there been a thorough reinspection when or after they were mustered in. The Commission took occasion soon after its organization to address the Governors of all loyal States on the need of more rigorous inspection of recruits. It is unfortunately certain, however, that this important duty has continued to be generally neglected or superficially performed. A careful examination of the causes officially assigned for the discharge of 1,620 men, from the army of the Potomac, as unfit for service, during the month of October, made by a Committee of the Inspectors of the Commission, experienced in observation of military hospitals, leads to the startling conclusion that fully fifty-three per cent. of the whole number were thus discharged on account of disabilities that existed at and before their enlistment, and which any intelligent surgeon ought to have discovered on their inspection as recruits."

We are glad to see that the Commission are awake to the vast injury, in a sanitary point of view, which vicious soldiers are capable of inflicting. They say: "The mere presence in camp of half a dozen dissolute, insubordinate and ruffianly men, tends very much to retard the progress in discipline of the whole command. They set an example of unwholesome indulgence of every kind, thwart all measures for the sanitary improvement of the camp, are the first subjects of disease, and the first to turn their backs on the enemy. Whatever disloyalty and desertion have occurred among our soldiers, may generally be traced to persons of this class. It is to be hoped that all such will hereafter be rigorously excluded from the people's army."

Imperfect ventilation of tents at night is thus alluded to: "Tents are seldom tolerably ventilated at night. Of the regiments under consideration occupying the wedge tents, none were found in which the Inspectors were satisfied that proper attention was paid to ventilation, and it was obvious in some cases that the men suffered in health in consequence. The Sibley tent is more convenient of ventilation, and cannot as well be tightly closed as the wedge form. The Commission warned the Department, in August, of the evil likely to ensue from the difficulty of ventilating the wedge tents. It is now found that typhus is occurring more frequently in the regiments occu-



pying these tents than in those that have the Sibley—the ratio being 29.5 to 23. The Inspectors have advised the striking of each tent once a week, for the purpose of giving it a perfect cleansing and airing, and the practice is being of late quite generally adopted.”

A somewhat singular result is arrived at with regard to the flooring the tents, as affecting the health of the men. If it should be positively proved that the use of india-rubber blankets tends to the production of typhoid fever, by preventing the escape and producing reabsorption of the emanations from the body, a knowledge of the facts would save a great expense to those who can ill afford it, as well as a loss of life.

“Twenty-four per cent. of the regiments were provided with tent-flooring of boards, twenty per cent. with india-rubber cloth; in twenty-one per cent. straw or branches were used for this purpose; and in thirty-five per cent. the men slept on the ground. A limited examination of the diseases of the army indicates that the largest proportion of those of typhoid type occur with regiments sleeping on rubber blankets, the least with those on straw or boughs; the largest proportion of catarrhal with regiments on wooden floors, the least with those on the ground; the largest of rheumatism with those on wood, the smallest with those on straw or boughs; the largest of malarial with those on the ground, the least with those on straw or boughs. In eighty per cent. of the camps, they are reported to be properly arranged, and kept in proper order, no offensive odor drifting from them. In twenty per cent., proper attention was not given to them, and the health of the men was more or less seriously endangered in consequence.”

Neglect of personal cleanliness, the use of intoxicating liquors, and lax discipline, are referred to as pregnant causes of disease.

The Sanitary History of Bull Run, found in the Appendix to the Report, is a curious and interesting document. We have not space to give anything more with regard to it than the following extract with regard to the “Causes of Exhaustion” during and after the battle:

“In explanation of the alleged excessive exhaustion of the men towards the close of the battle, the officers consulted in twenty-six of the twenty-nine regiments referred to, attributed it to fatigue and heat, twenty-one to lack of food and drink. All the reports which assigned insufficiency of food and drink as a cause, also assigned excessive fatigue. Six of them assign fatigue, and especially the march at double-quick, as the main cause of the exhaustion which was manifest during and just after the battle.”

— We reprint in this number the very valuable "Report on Venereal Disease," published by the Commission, for distribution among the Surgeons of the Army. It is from the pen of Dr. Bumstead, and sustains his reputation as a syphilographer. We may mention in this connection the appointment of this gentleman as Surgeon to the N. Y. Eye Infirmary, *vice* Dr. Gurdon Buck, resigned.

— ACADEMY OF MEDICINE.—At the meeting of January 29th, the following gentlemen were chosen delegates to the New York State Medical Society, which meets on Tuesday, Feb. 4th, according to law: Drs. JOHN W. GREEN, O. WHITE, JARED LINDSAY, and J. P. GARRISH.

The following timely resolutions were introduced by a prefatory note from the venerable Dr. Mott, and unanimously passed; and on motion of Dr. Adams, the delegates to the State Society were directed to introduce the subject there, at the coming meeting:

SIR—We have all been annoyed with the intimation that the noble Surgical Staff of our Army might be polluted with Homœopathy. We all honor the regular profession, and when an attempt is made to impair its usefulness, or detract from its dignity, we should promptly and unitedly repel it.

Influenced by these sentiments, I forward to you the accompanying resolutions, and beg you to introduce them at the meeting this evening, as coming from me. A broken metacarpal bone prevents my presenting them in person.

Yours truly,

VALENTINE MOTT.

1 GRAMERCY PARK, Jan. 29th, 1862.

"Whereas, Petitions have lately been presented to the Senate and House of Representatives of the United States, for the employment of Homœopaths as Surgeons in the Army: therefore,

"Resolved, That the New York Academy of Medicine deem it their duty, in the interest of the Army, respectfully to protest against the employment of such practitioners, for the following reasons:

"1st. That the practice, wherever subjected to accurate observation, has failed to establish itself in any hospital.

"2d. That in the countries where it originated and attained its fullest degrees of development, it has not been introduced into the army or navy.

"3d. That it is no more worthy of such introduction than other kindred methods of practice as closely allied to quackery.

"4th. That such appointments would dissatisfy and dishearten the Medical Staff of the Army, who understand the true character of Homœopathy, and who have entered the service of their country with confidence that the Government would strive to elevate the standard and promote the efficiency of the Medical Staff—results surely to be defeated by the appointment of Homœopaths.

"Resolved, That a copy of the above resolutions be sent to the Hon. IRA HARRIS, of the U. S. Senate, and the Hon. F. A. CONKLING, of the House of Representatives, with a request that the resolutions be presented to the two Houses of Congress."

We sincerely trust that this action will be the forerunner of similar

protests from Societies in every part of the country. Homœopathy has been too thoroughly damned by every governmental commission in Europe to have it fastened on to our own military system at this late day.

—The *Metropolitan Health Bill* is another matter of prime importance which will be brought before the State Society. Its most noticeable feature is its topographical comprehensiveness. It embraces within its provisions three entire counties, those of New York, Kings and Richmond, and thus guards all the approaches to the city. This alone places it far in advance of any other bills that may be offered; for, in addition to the scandalous means which were successful in defeating it last year, other bills have been prepared, which will be brought before the Legislature this winter, with a view of distracting the attention of that body and introducing side issues. One of these emanates from the office of the City Inspector, and was, in fact, embodied in his report. Its principal provisions are as follows:

I. The abrogation of all powers, as at present vested in the Common Council, over the sanitary affairs of the city.

II. The sole power to be vested in a Board of Health, to consist of the—

*Ex-officio*—Mayor;

“ City Inspector;

“ State Health Officer;

“ Chairman of the Commissioners of Public Charities and Corrections;

“ President of the Commissioners of Emigration;

“ Presidents of the Five Dispensaries; and

Three Physicians, to be chosen by each of the Boards of Trustees of the Five Dispensaries.

*Total*, 25—Physicians, 15; Laymen, 10.

III. Twenty-two Health Wardens, to be Physicians.

The introduction of Dispensary Physicians, who have a better opportunity than any other men in the community of knowing the exact sanitary condition of the city, into the Health Board, is certainly an idea worthy of consideration, and we doubt not, would receive it from those who might be appointed to carry out the provisions of the bill first referred to; but to compose the entire medical side of the Board of such physicians, would, in our opinion, be an error. One Visiting Physician from each Dispensary would be of equal service with five. But as this bill has no chance of passing, it is not worth while to discuss its provisions. We have noticed it, that our readers may appreciate its object, and use their influence with legislators to thwart it.

—DEATH OF THE INVENTOR OF THE STOMACH-PUMP.—We find in the *Medical Times and Gazette* an obituary notice of Dr. Scott, formerly of London, who, with one Jukes, assisted by an ingenious gardener named John Read, in the year 1822, inspired by the death of the Primate of Ireland, (as was supposed from laudanum,) invented the stomach-pump. His health failing, and thus compelling him to give up his lucrative practice, by the advice of his friends he opened an establishment for the sale of mechanical contrivances for medical and surgical purposes, which for a while promised immense success, but finally fell through. At the time of his death, he was resident physician at Woodhall Spa. The simplest contrivance having for its object the mechanical evacuation of the stomach, is that described to his class by the late Prof. J. K. Mitchell, of Jefferson College, Philadelphia. It consisted of two elastic tubes, which are successively passed down the œsophagus to the stomach, both being allowed to remain. A constant stream of water is then poured into the longer tube, which, as soon as it has filled the organ, naturally finds its way out of the shorter. The stomach is thus most effectually washed out, and the process can be continued as long as is considered expedient without hazard to the patient. While, therefore, we appreciate the talents of honest John Read, the gardener, in contriving a "patent pump to be used for medical purposes," we are inclined to think that had Dr. Scott been left to himself with his "simple tube and india-rubber bottle," he would have made a better instrument of it.

—A GOOD WORD FOR DOCTORS.—Physicians are so accustomed to seeing themselves ridiculed or found fault with in public prints, that the following, from *Blackwood*, is quite a pleasant surprise: "We delight in doctors, who are the best friends of frail humanity, and the least quarrelsome fellows you can meet with anywhere, except when they wrangle among themselves. No other class of men enjoy life with as keen a relish, or are so indefatigable in their efforts to promote the happiness and welfare of mankind. They are, too—we say it in all seriousness—the most disinterested of mortals; for although disease is their harvest, we find them always true and faithful monitors, warning us against the evil habits that tend to the destruction of health; and if we were wise enough to profit by their maxims, to live rationally, and to avoid all manner of excess, few would be the fees accruing to the successors of Machaon and Podalirius."

—EDICT AGAINST QUACKERY.—The Royal College of Surgeons in Ireland finds it necessary to protect itself against dishonorable practices on the part of its Licentiates, as indicated by the following from

the *Medical Circular*. "At a recent meeting of the Council the following ordinance was passed: No Fellow or Licentiate of the College shall pretend or profess to cure diseases by the deception called homœopathy, or the practice called mesmerism, or by any other form of quackery; neither shall they, or any of them, seek for business through advertisements, or by any other disreputable method. It is also hereby ordained that no Fellow or Licentiate of the College shall consult with, meet, advise, direct, or assist any person engaged in such deceptions or practices, or in any system or practice considered derogatory or dishonorable by physicians and surgeons." We might infer from this that while here, honest and intelligent men were clearing their skirts of follies and delusions into which they have been led, there, on the contrary, error is gaining ground to such a degree as to make formal enactments against it necessary. Of the expediency of denying consultations to homœopathic practitioners, we have no question whatever. The more respectable and fashionable the quackery, if it be clearly such, the more binding is the requirement upon the physician, founded on love to humanity as well as justice to his fellows, to discountenance it in every possible way. If then, a medical man is called upon to attend a family who employ a quack habitually, he should make the dismissal of the latter the first condition of his attendance.

—GOING TO THE ROOT OF THE MATTER.—Prof. Carnochan has recently removed about two and a half inches of the *second branch* of the *fifth pair*, measuring directly from its point of emergence from the *foramen rotundum*. The disease was *tic douloureux*. The result of the operation was its entire relief. The Professor's theory in these cases, to which he has been led by repeated failures to produce a cure by mere division of the nerve, is, that disease existing anywhere in its course will produce sensations of pain at its extremities, and that even though the connection between the extremities and the diseased root be cut off, the sensations are still referred to the periphery, just as the mutilated soldier still suffers from aching toes at the end of his cork leg. If then, the diseased portion of the branch be left, division or excision of a small portion of the intermediate conductor is of little or no use. The brain has been too well educated to refer the suffering to any point but the sentient loops.

—AMERICAN SURGERY ABROAD.—It gives us sincere pleasure to welcome back again to the active ranks of the profession our distinguished countryman, Dr. SIMS. He has had an opportunity, and a deserved one, of establishing in the eyes of scientific men in Europe his right to be considered the originator of a mode of operation which, even in the brief space of time since he first promulgated it,

has been of immense benefit to suffering humanity, and of which the most persistent and unwarrantable efforts have been made to deprive him. His reception in Paris was most gratifying—not only was he called upon to operate before crowded classes in five of the largest hospitals of that city, but the most eminent surgeons confided their private patients to his professional skill. Fourteen cases, only four of which were not *unusually bad*, and fourteen cures! Such is the brief record of his labors in the Capital of the Medical World. We doubt if a similar score had ever been run up there before. “I was certainly very lucky,” says the doctor, modestly. The one of us who has had the most experience will probably be best able to estimate the “luck” at its true value. The *Times*—not the English Blood and Thunder War-sheet, but its more peaceably-inclined namesake on this side the water—recently contained a letter from its special correspondent in Paris, which was almost entirely devoted to the consideration of Dr. Sims’ visit and success. He mentions a case which possesses considerable interest in view of the question of the employment of anesthetics, which has recently been brought so prominently before the profession in this city.

It was that of a young Countess, whose case had been pronounced hopeless by the leading surgeons, and who was placed under his care by Nélaton. A feature of the operation was her narrow escape from death by chloroform. The method adopted for the restoration was both novel and rational, and we are told that it is now generally followed in similar cases in that city. It consisted in “throwing the head of the patient down, and the feet in the air at an angle of about forty-five degrees. By this manœuvre, the brain and heart, with an increased quantity, receive an increased amount of stimulus, from the blood, and life is preserved until the volatile poison has spent its force, and is dissipated.” The ordinary measures, friction, artificial respiration, and evulsion of the tongue, were also practiced.

—MALAKOFF.—As we have thus been led to mention the *Times*’ correspondent, we may say that “Malakoff,” as any physician would have divined from his intelligent treatment of medical subjects, is an M.D. We made his acquaintance as an active member of the “American Medical Society in Paris” some years since, and have always looked back to it with pleasure. We are happy to see that he has recently been granted a license to practice medicine in the City of Paris, a favor rarely and grudgingly accorded to foreigners by the authorities of that well-regulated, but somewhat French, city. That he will acquire a large and lucrative practice among American residents there, we cannot doubt.